Cash limits block rise in home students

by Ngaio Crequer

Nearly 2,000 more home undergraduates have entered university this year but with no extra government funds to meet the growth well-qualified candidates are being turned away, according to the Committee of Vice-chancellors and Principals.

Its bleak warning this week was in response to a Parliamentary answer on student numbers. The committee went on to say that "if present financial policies persist, more good candidates will be disappointed in the future".

The figures show a 2.3 per cent increase in home undergraduate numbers and 3.7 per cent increase in postgraduate over last year. The CVCP says that the undergraduate increase is limited to the number of 18-year-olds and universities have done all they can to ensure that opportunities for school leavers does not deteriorate despite lack of funds.

The Government also gave the first official figures for overseas numbers, showing a decrease of 9.3 per cent in undergraduates and 11.1 per cent in postgraduates for October, 1980.

The decision to make universities charge full cost fees to overseas students is blamed for the drop in recruitment and universities have also lost money by charging the minimum rather than actual cost of tuition fees.

"The future is grim. By next year a very much larger proportion of the overseas students in universities will no longer have the protection of being 'continuing students' and will be forced to pay the new higher fees", said the CVCP.

"This will certainly have the most serious financial implications for universities since tuition fees income from overseas students now pays for a significant part of the essential running costs of universities", it said.

The committee said that by 1982/83 the Government would have removed some 10 per cent of universities' income from the recurrent grant and substantial fee increases would be needed to get anywhere near recouping the loss whatever the level of the minimum fee even if the present intake could be maintained.

"But overseas undergraduate applications for next year are running at some 40 per cent below this year's reduced level. Still heavier fee increases, together with the effects of a strong pound and the high cost of living in Britain, might well drive still more students to study in other countries where overall costs are much lower", said the committee.

Talks are taking place between the Government and the University Grants Committee on likely fee levels for overseas students next year. The UGC will probably recommend a minimum fee and leave universities to decide whether they should charge above it. There has also been some discussion on whether university and public sector overseas students fees should be more in line.

Any new fee levels will be bound to reflect the rise in inflation which will make the decision whether to charge very high fees to maximize income, or to charge minimum fees in the hope of getting more students, more difficult.

Leader, page 27

Dean threatens to resign in OU promotions row

by Cherlotte Berry

The Open University's dean of technology has threatened to resign after a policy decision to promote only one Milton Keynes-based academic to the post of senior lecturer this year.

The matter will come to a head at next weeks' senate meeting when academics will debate a motion put by the technology faculty board asking the university's promotions committee to reconsider its decision.

Academic promotions are considered from names put forward to a committee elected by senate by individual constituencies, consisting of the eight faculties and both the regional senior counsellors and staff tutors.

This year, out of 24 names submitted by the faculties only one was promoted to senior lecturer by the academic staff promotions committee. In the OU's 13 regions four out of eight recommended academics were promoted to senior counsellor and four out of eight to staff tutor.

The resolution put to the senate by the technology faculty board requires the committee to "reconsider the cases of the unsuccessful candidates for 1980 promotion on the basis of separate constituencies and of each agreed faculty promotions policy statement".

Members of the technology faculty are angry because they claim the committee has taken no account of its staff planning policy. This is in spite of a request from the senate for individual deans to develop a long term strategy for promotion.

Discontent has been growing for some time over the promotions procedure. Opportunities for promotion within the OU are particularly slender because of its unusually high proportion of staff under the age of 40. It has been calculated that the average age for promotion to senior lecturer is 57.

The Queen Mother waves farewell. She made the surprise announcement this week that she is resigning as Chancellor of the London University after 25 years.

Only one or two senior members of the university knew beforehand of her decision, which she announced at Foundation Day. Apparently she had decided that 25 years was a suitable period.

Convocation, which elects the chancellor, will now be calling for nominations, but its standing committee is to recommend for nomination Her Royal Highness Princess Anne, Mrs Mark Phillips.

Redundancy compromise

A compromise which could represent the last hope of ending the dispute between lecturers and their local authority employers over redundancy procedures has been put forward by union officials.

It will be discussed today at a key meeting of the national joint council on lecturers' conditions of service, whose very existence has been threatened by the row only months after its inauguration.

The effect of the plan which officials regard as the end of the road in their long search for a solution, is to preserve the 1975 procedures agreement in areas where it has already been endorsed by the local education authority or actually used.

It is a tactical retreat from the hard line previously pursued by the National Association of Teachers in Further and Higher Education, which has always argued that the agreement, which embodies a recommendation that one year's notice of redundancy should be given, should be binding on all 104 education authorities.

But the price employers are to be asked to pay for this concession is a firm commitment to negotiate new and improved rules.

The union intends to press for a mechanism through which redundancies may be recognized earlier, which will provide for voluntary means such as premature retirement compensation.

Teaching shortfall revealed

A major shortfall in the Department of Education's 1980 targets for admission to BEd and specialist one-year courses in 56 colleges and 22 polytechnics has been confirmed by figures released by the Central Clearing House.

The figures released this week show a 35 per cent shortfall in planned number of 9,100 admissions. Altogether 5,668 students were admitted to teacher training courses, 314 of these on one-year courses in business studies, craft design and technology and music.

The majority of applicants who did not start courses (2,943) had been offered conditional places for which they failed to qualify and 2,789 had withdrawn their applications.

A shortfall was forecast by the decrease in the number of applications which went down from 15,869 in 1979 to 11,586 this year. This was mainly due to the new O and A level qualification level.

A survey of 36 institutions carried out by the *TES* and *THES* in early October showed that polytechnic departments of education were facing slightly worse than colleges but highlighted a disparity between institutions claiming a 100 per cent take up and others reaching only 33 per cent.

The gloomy picture was alleviated by a substantial increase in the number of admissions to Postgraduate Certificate of Education courses in higher education institutions which exceeded the target figure of 9,800 by nearly 1,000.

Altogether 10,721 students were admitted to PGCE courses in 30 universities, 15 polytechnics and 41 colleges, 5,523 in universities and the remainder in polytechnics. The figures represent nearly an 8 per cent increase over the 1979 intake. The total number of applications rose to 17,061, an increase of nearly 2 per cent over last year.

IUC dispute

from page one

job of director. Dr Alan Russell, who holds the post at the IUC, joined the council on an initial contract of only a year and both sides claim responsibility for the appointment. The universities see this post as crucial to their insistence on preserving the character of the IUC within the British Council.

Universities have been sceptical about the operating methods of the British Council, which many regard as unnecessarily bureaucratic and are anxious to maintain the direct institutional contacts and independence of the IUC.

Since it is a limited company, the universities could resist Government pressure to disband the IUC but its reliance on public money has ruled out a rearguard action.

The new unit, to be known as the Standing Committee for University and Higher Education Overseas, would satisfy complaints of duplication of provision in academic aid. At present, some countries are the preserve of the IUC while others are the responsibility of the British Council. The new arrangements would be expected to streamline provision and improve services to overseas students.

Police swoop on Welsh student village

University College Swansea, is demanding a full explanation from South Wales Police following a dawn raid by armed officers on a student village.

Students claim that armed police, wearing bullet-proof flak jackets and carrying pistols, rifles and sledge hammers, swooped on two houses on the college campus early last Friday.

It is understood the operation involved members of Scotland Yard's anti-terrorist squad and Special Branch officers who were looking for Palestinian terrorists.

One student, a Jordanian who was born in Palestine, was detained and taken to a local police station but released after a couple of hours. Mr Bill Morris of the college students' union said: "We are quite disgusted by the behaviour of the police in this incident.

"They got students out of bed at gunpoint and put them against the wall outside the house in the snow. Most of the students were terrified particularly because the police weren't wearing uniforms and didn't produce any search warrants or any identification at first."

Sir Keith attacked on Finniston

by Robin McKie
Science Correspondent

Industry Secretary Sir Keith Joseph was this week accused of "deliberately avoiding parliamentary debate and decision" over the setting up of a chartered body to control the engineering profession.

The attack was made by Mr Arthur Palmer who said, in a Commons debate, that Sir Keith had succumbed to pressure from the country's engineering institutions to reject the Finniston report's recommendation for a powerful, independent statutory engineering authority.

The proposed chartered body was also criticized this week by the Royal Society which has written to Sir Keith to express concern about the ineffectual make-up of the proposed authority. "We feel that what is a new body comparable to the existing Council of Engineering Institutions", states the letter which is signed by the society's physical secretary and vice-president, Dr Morris Sugden.

In his Commons speech, Mr Palmer said Sir Keith had made a great blunder in deciding to have a more chartered authority responsible to the Privy Council. "A key facet of the Finniston report was the emphasis that it placed on the statutory registration and eventual licensing of engineers," he said.

This should be carried out by a powerful independent authority. Instead Sir Keith had chosen a body that would be "a pale shadow of what the Finniston report proposed, under the auspices of that somewhat medieval body, the Privy Council".

Mr Palmer also criticized the engineering institutions for failing to consult their members over their views about the form of the engineering authority. He revealed that he had recently written to the Privy Council to complain about lack of consultation among the institutions. It is now understood that Mr Palmer's own institution, the electrical engineers, has been asked by the Privy Council to account for its procedures for consulting members.

Mr Palmer urged that instead of merely including powers to set up the authority in the present Industry Bill, a separate Bill should be brought in to give MPs the opportunity to look at its detailed provisions in committee.

In his letter to Sir Keith, Dr Sugden highlighted four main areas of concern about the proposed make-up of the authority, including the draft charter proposed by the engineering institutions presidents in response to Sir Keith's original plan.

The new body would have insufficient powers, would lack adequate funds, would not properly represent all interested parties (including scientists and educationists) and would provide insufficient safeguards for a chairman of the necessary standing. The authority would need between £1-2m a year and should have a council made up of five professional engineers, five industrialists, three educationists and two scientists, the Royal Society urges.

NEXT WEEK

Rosemary Murray on New Hall
Denis Donoghue on Geoffrey Hartman.
Ali Mazrui on academic freedom part 2
Maurice Cowling on Whitehead
MSC's training blueprint
AUT council preview

THE TIMES
Higher Education
SUPPLEMENT
December 12, 1980 No 423
Price 35p

Cash limits could force small authorities to give up polys

by Peter David

Some local authorities could have to give up their polytechnics if the cuts announced in the Rate Support Grant settlement next week fell heavily on higher education.

This was the grim warning given this week by Mr Jack Springett, education officer of the Association of Metropolitan Authorities, on the eve of a meeting between councillors and Dr Rhodes Boyson, the under secretary for higher education.

At the meeting in London today, Dr Boyson was expected to tell the authorities of his plans for the size of next year's Advanced Further Education Pool, the central fund which reimburses councils for their spending on polytechnics and colleges.

There is a growing fear among local government leaders that the AFE pool will be cut disproportionately, perhaps by up to 5 per cent, simply because it is the only major area of local education spending on which the government can impose a direct cash limit.

Mr Springett said that a cut of 5 per cent in the pool, which this year was set at £375m, would be totally unrealistic. It might satisfy authorities which contribute to the pool, but small authorities which provide polytechnics would be placed in an impossible situation.

"If you take about 5 per cent off the pool you are well into the realm of the unrealistic," he said. "Authorities just would not be able to get rid of teachers at that rate."

"It will call into question the willingness of authorities to go on doing this job. It will increase the temptation for some authorities to withdraw from advanced further education altogether."

Teesside cut will affect standards

by David Jobbins

Teesside Polytechnic is facing a new financial crisis in which senior staff have warned that academic standards will be seriously affected.

Cleveland County Council has told the polytechnic to cut its budget for the current financial year by £32,000. Director Dr Michael Longfield says this means a 40 per cent cut in controllable expenditure, excluding which remains after wages, rents, rates and interest charges have been paid.

The economies have to be made by the end of the financial year so their impact will be even harsher.

The polytechnic's academic board has accepted they can be made but has, in a resolution forwarded to governors: "They can only be considered at the cost of very serious short and long-term effects on academic standards."

Senior academics described the demand as grave and the academic board specifically drew attention to the resource problems faced by the polytechnic which had directly to the highly critical visit by the Council for National Academic Awards in 1978.

It was exactly a year ago that Teesside emerged from the cloud of that visit and the subsequent highly critical report. Last December the CNAA lifted its three year threat to withdraw approval from the polytechnic, following a massive injection of cash by Cleveland council.

The debt the polytechnic owes to Cleveland for its support is acknowledged by Dr Longfield. "The present cuts should perhaps be seen in that light," he said in a personal message to staff in the polytechnic's news letter.

He warns: "We shall emerge from this most cutting exercise next April to meet challenges which will test us again in the next financial year. But with your support we shall continue to warrant the distinction of polytechnic status."

The polytechnic's branches of the National Association of Teachers in Further and Higher Education have warned that the cuts will lead to a deterioration in the educational service offered. Among staff there is a general recognition that Dr Longfield is doing his best to minimize the impact on standards.

Cleveland has been forced to make economies because it anticipates it will have overspent its budget for all its services by more than £4m by the end of the year.

The polytechnic's share corresponds with the drop in expected fee income attributable to the fall in overseas students numbers, although enrolments have increased dramatically.

Redundancy talks near breakdown

Talks between lecturers and their local authority employers on redundancy procedures are perilously close to breaking down.

The management panel effectively rejected a compromise put forward by National Association of Teachers in Further and Higher Education officials at the "end of the road" of the long standing dispute over the status of the 1975 redundancy procedures agreement at last week's meeting of the national joint council on conditions of service.

Union leaders detected a hardening attitude among employer representatives, who were not prepared to accept that the agreement which recommends a year's notice of redundancy—should be given binding effect on authorities that either ratified or used it.

NATFHE general secretary Mr Peter Jackson said after the meeting: "Our representatives were extremely disappointed and disappointed. The executive is meeting this weekend when there will undoubtedly be a very detailed and urgent discussion.

"I think we will wish to continue to explore how the position of the employer panel will once again be the question in the minds of many members of the whole future usefulness of the NJC."

Both employers and union have agreed that the NJC as a first step towards establishing a negotiating forum for both pay and conditions free from statutory control under the Remuneration of Teachers Act, which the NATFHE short but stormy and the apparently unnegotiable solution to the dispute over redundancy procedures is certain to harden the attitude of Natfhe.

Athlone Press up for sale again

by Ngaio Crequer

The Athlone Press, said by the University of London last year to be up for sale and its present owners have announced their withdrawal from all book publishing.

The Bemrose Corporation is holding discussions with interested parties to try to ensure the continued survival of three of their imprints, Athlone, Mansell and Scolar. Redundancy notices have been given to 50 staff, six of whom are at Athlone, and they will expire at the end of the year.

Mr John Commander, Bemrose Publishing's chairman said this week "We have had to serve redundancy notices in the light of our decision to disinvest but we are having talks with a number of people to try to develop a framework in which the Athlone Press in its present persona may in fact be continued.

"With hindsight one could say yes, it was a mistake to buy it, but at the time it was very well considered by ourselves and London University and it was all in the context of a completely different economic situation."

Although he would not give any indication of the financial losses he said the Athlone Press was in a "distinctly loss making condition". The university sold the Press in February, 1979, after rejecting an earlier recommendation to close it down, because it felt unable to justify the large capital investment it needed.

An Academic Advisory Board, which includes academics from the university, will discuss the situation next week. But the board which was not informed in advance of the Bemrose decision, has no managerial function and only advises on titles and choice of programme.

Dr John Black, principal of Bedford College, and chairman of the board, said this week: "We are naturally very distressed to have learned that Bemrose is no longer to be concerned with book publishing and very much hope that a suitable arrangement can be made to continue the imprint. I am sure the board will give its strongest support to any arrangement that can be made."

The Bemrose decision highlights the precarious situation in which academic publishing now finds itself. Several university presses are experiencing severe financial problems. Earlier this year, Liverpool University Press survived a recommendation to close it because of financial losses. Cuts had to be made and there was careful scrutiny of the publishing programme.

The Oxford University Press, the largest independent publisher in Britain, has predicted a trading loss of £2m next year despite sales being up. A spokeswoman said: "We are having a financial crisis but the figures very from day to day."

Educational publishers are very concerned for the future and it is expected that they will try to lobby the University Grants Committee and local authorities to try to earmark funds for library spending at institutions.

Between 45 to 50 per cent of all academic sales are made to state institutions. The Publishers Association has conducted a survey of university library book buying which shows a drop by a third between 1971 and 1977. A similar review of polytechnic spending is likely to show a similar trend.

It has sent out a questionnaire to nearly 5,000 university, polytechnic and college lecturers on the use of books in teaching and the problem experienced. It is also looking at the situation in further education colleges and has discovered that £4.36 per head per student is spent on books compared with £6.98 for secondary school children.

Apart from the problems of the recession, booksellers are suffering from the strength of the pound and the weak dollar. The chances of bright scholars now getting their theses published are very slim. There is also much more emphasis on publishing in journals than books, although this has been true for some time in science.

Spending row splits ranks of SRC

by Robin McKie
Science Correspondent

A fierce row has broken out between two of the main organizational branches of the Science Research Council. The engineering board has launched a bitter attack on the science board, which supports research in basic areas of chemistry, physics and biology, for its massive overspending this year.

There were particularly angry scenes at the engineering board's last meeting when members heard that the SRC wanted to reduce £1.8m from its budget to bail out the science board which has overspent by about £3m. That money will not be paid back for another two or three years and furious board members passed a unanimous motion denouncing the plan.

This motion is to be discussed at next Wednesday's full meeting of the SRC when chairman Sir Geoffrey Allen will have to control a very heated debate. The engineering representatives are particularly furious that their programmes are suffering because of science board actions which they consider irresponsible.

The issue has caused a great deal of strong feeling and the SRC faces the possibility of several resignations if the row is not now carefully handled. It is very unusual for an SRC board to pass such a strong motion, and unprecedented for one board to attack another in such a way.

One likely solution to the problem will be for other council boards to increase their support for the science board. In particular, the astronomy, space and radio board may supply a further £500,000 to help them out.

Contents

Freedom in Africa

Ali Mazrui discusses the hidden enemies of academic freedom in the new states of east Africa, 11

New Criticism
Denis Donoghue reviews a new collection of essays by Geoffrey Hartman on literary criticism in an age of mass culture, 13

A. N. Whitehead
Maurice Cowling discusses the metaphysical dimension in the thought of the mathematician A. N. Whitehead, 10

German biotechnology
Robin McKie reports on German progress in biotechnology that puts Britain to shame, 7

Arts in "The THES"
A new arts page, with Howard Barker on censorship, a listing of forthcoming events, and an arts miscellany, 12

25 years of New Hall
Rosemary Murray celebrates the achievement of New Hall, Cambridge, on the college's silver jubilee, 9

North American news	5
Overseas news	6
Books	13-18
Science books	17, 18
Noticeboard	19
Classified index	20

Opinion
Union view (Natfhe)
Keith Hempson, MP
Doo's Diary 25
Laurie Taylor, Letters 26
Leaders (academic publishers, AUT pay, a ministry for science ?), Patrick Nuttgens 27

£98 fees 'put OU out of reach'

by Charlotte Berry

The Government-imposed 46 per cent increase in Open University student fees strikes at the very root of its openness, a Labour MP told the Commons last week.

Mr Ted Graham, MP for Edmonton, who is an OU graduate, said that the rise from £67 to £98 in tuition fees next year was a "whopping increase". The rise should have been to £80 a year to keep pace with inflation.

He told the Commons that due to the deteriorating economic situation an increasing proportion of students offered a place at the university later declined it. "I strongly suspect that this trend will accelerate", he said.

Mr Graham called on the Conservative Government to dispel any impression that it is hostile or antipathetic to the continuing development of the OU.

"I believe that the ethic of self help has a certain attraction to the Conservative philosophy, and that the concept of value for money and comparative cost for the same product should commend the OU to this Government", he said.

He added that the unexpectedly large increase had come as a particular shock to the OU against a background of professed public support for it from Government ministers.

"The action of the Department of Education and Science in arbitrarily increasing fees without consultation has caused dismay, resentment and unease about future intentions", Mr Graham added.

Mr Rhodes Boyson, under secretary responsible for higher education, admitted to the House that he had been "dubious" about the OU when it opened 10 years ago.

But he added: "I have totally changed my mind about the OU and I am not the only Conservative member to do so. It is one of the most interesting developments in our education system over the past 20 years."

Mr Boyson stressed, however, that the Government has limited resources and must order its priorities. The OU will receive a cut of £1.36m (about 2 per cent) in its budget next year, but spending this year will be £48.4m compared to £45.6m last year.

He said that the money made available this year will allow new course production towards the OU's target of about 87 full credit courses, and enable the maintenance and updating of existing courses. It will also allow an increase in the number of students from 61,000 to 67,000 next year, enabling an intake of 21,000 new students.

More women, fewer teachers apply for places

More women and fewer teachers are applying to study at the Open University. Women now account for 45 per cent of applicants to the OU, compared to 30 per cent in 1972. Out of 43,000 applications to begin study next February, only 16 per cent are teachers. Ten years ago they comprised 30 per cent.

Admission to the OU is on a first come, first served basis and applicants need no formal educational qualifications. This year 49 per cent would not normally have been accepted by conventional universities. Applications from working class people are up to about 30 per cent, compared to only 22 per cent in 1972.

The total number of applications this year was 2,000 down on last year's figure of 45,000. The biggest drop in numbers was in the Northwest, down 625 to 4,219 applicants. London and the south regions were down by 406 to 6,022 and 347 to 4,164 respectively.

Classified information.

Pass it on.

The principles of electronic warfare. How the RAF uses the silicon chip. The fundamentals of modern engine technology. These are the kind of subjects that would be on your syllabus as an Education and Training Officer in the Royal Air Force. And you'll find that you'll be teaching these subjects in almost ideal conditions.

You'll have the best instructional aids at your disposal. You'll have small classes, generally of around 20 people, ranging from young apprentices and technicians at our schools of technical training to officers on post-graduate courses. And you'll find that those people will be really keen to learn.

But being an Education Officer in the Royal Air Force means doing a lot more than just teaching.

Since you'll be teaching very advanced technology you'll have to learn much of it at first hand. You'll work closely with our other Education Officers and benefit from their experience. You'll go through the latest publications with a fine toothcomb. And help decide which information should be built into the various courses.

You might visit the research and development departments of both the RAF and our equipment manufacturers. Then, as well as all this, you'll have the varied responsibilities and rewards that go with being an RAF officer.

It's a demanding career, we admit. But the people we're looking for probably wouldn't want it any other way.

If all this has aroused your interest, we'd like to hear from you. We'll then write and explain it all in more detail. We'll tell you about the sports facilities and the social life. We'll give you the details of our gratuity-earning Short Service Commission which range from 3 to 6 years and also of the 16-year pensionable commission. Then, if you apply and are accepted, we'll ask you to join us on a starting salary which could be as much as £8,713 p.a. depending on your qualifications and experience.

QUALIFICATIONS. You may apply to be an Education and Training Officer if you have never taught but hold an HNC (or better) in the GCE 'O' level in English language (or equivalents to these) or better still, a Degree in any Engineering subject, or in Physics, Mathematics or a computing discipline. We'd train you to become a teacher in your specialist field. Please write to Squadron Leader P. L. Graves MSc RAF, Officer Careers, (PA/E), London Rd, Stanmore, Middlesex HA7 4PZ.

Or, of course, you could call at your nearest RAF Careers Information Office. The address is in the phone book.

Please enclose a separate note stating your name and date of birth and your intended qualifications. Formal application must be made in the UK. Upper age limit is 30.

RAF officer
EDUCATION & TRAINING

Anti-UGC motions fail to win support

by Ngaio Crequer

Two motions put to Warwick University senate rejecting greater intervention by the University Grants Committee failed to attract sufficient support to be voted on.

The motions, from the faculty of social studies and from the faculty of arts, were proposed and debated but because of overwhelming opposition, no vote was taken.

The debates followed a speech made to vice-chancellors by Dr Edward Parkes, chairman of the UGC. He warned that in future there would be a greater degree of direct intervention by the UGC in the affairs of individual universities than had been either necessary or customary in the past.

The faculty of arts motion noted with concern reports that the UGC was becoming more dirigiste and urged senate to accept that universities were already subject to financial constraints laid down by the committee and planning constraints in terms of student numbers.

"There had to be public accountability but this must be related to the energetic pursuit of teaching and research, which must be controlled from within the universities.

Labour pledge to implement Finniston

It is one of the great tragedies at the moment that the Government has failed to properly implement the Finniston report to halt the long-term decline of British manufacturing industry, Mr John Silkin, Labour MP for Deptford, told the House of Commons last week.

Speaking in a debate on engineering industry, Mr Silkin said the entire Finniston report, which calls for major changes in the training of the engineering profession, should be implemented.

"I was about to comment on the Government's half-baked scheme. But in fact it is not baked at all. Their substitute scheme does not have the slightest possibility of having a real effect on the future of British engineering", he added.

Mr Silkin pledged that the next Labour Government would introduce all the recommendations outlined by Sir Monty Finniston and his committee of inquiry, particularly for a statutory engineering authority to control the profession. "We regard them as vital", he said.

Mr Silkin was backed by Mrs Joan Lestor, the Labour MP for Eton and Slough, who accused Sir Keith Joseph of ignoring the main features of the Finniston report. "One would have imagined that the Finniston report had never been written and its recommendations never made", she said.

Ms Lestor said she was struck by the way the Finniston report had highlighted the different attitudes of management in many other countries. "The report believes that the manager who has been trained in industry, who has an acquaintanceship with and a knowledge of what is managing and who is identified with the enterprise and the end product of his firm, makes a much better manager."

The Liberal MP for Truro, Mr David Penhaligon, said it was tragic that engineering did not appeal to the nation's best brains. When he visited local schools, he often asked sixth-formers if they intended to enter engineering or industry.

"I regard myself as lucky if one hand is raised. Very often not one young person wants to go into productive industry and make something. That is a fundamental long term tragedy for a nation that relies on engineering."

Project tells of its work

The Teacher Education Project, which researches more effective ways of training and developing courses, has produced a booklet summarizing its activities over the past four years.

The project, directed by Professor Ted Wragg and Dr Clive Sutton and based at Nottingham, Leicester and Exeter Universities, will close in March 1981, when its Government funding ends.

It was set up in 1976 initially to undertake research and development into the redesign of Postgraduate Certificate in Education courses, and then extended in work to in-service training.

It has published a large number of articles, carried out numerous case studies and carried out research on issues including problems of slow learners, bright pupils, teaching skills and roles.

Correspondence should be addressed to the project coordinator, Dr Trevor Kerry, School of Education, Nottingham University, Nottingham NG7 2RD.

Loughborough library opens

A £3m library will be officially opened today at Loughborough University. The Pilkington Library will house 350,000 books and 4,500 journals and will provide offices, teaching rooms, study and common rooms for staff and students on three floors.

The fourth floor will house the university's department of library and information studies, including a printing library and computer room. There will be close links between the department, which teaches young librarians and information scientists, and the library.

NUS conference at Margate. Peter David and John O'Leary report

Campus safety plan after Ripper attacks

Students are to take legal action against universities and colleges which refuse to step up protection for women on their campuses in the wake of attacks which include the murders by the Yorkshire Ripper.

The National Union of Students' conference at Margate agreed to present authorities with a list of 15 demands which include the short-cuts of the working day where no transport is available from lectures finishing after dark.

But the conference rejected a section of the motion, sponsored by more than 100 colleges, which would have given the union's support to women carrying weapons for self-defence.

Now NUS is to launch a vigorous campaign on women's safety, beginning with a national demonstration next term in either Leeds or Bradford. The two cities were the scenes of the Ripper's last two murders, when the victims were both students.

Many local unions have already raised the question of improving safety on campuses but some have been told that budget cuts make their demands impossible to meet.

Among the proposals agreed at the conference are the clearance of waste or heavily foliated areas, the improvement of lighting, provision of emergency telephones and alarms, and increased bussing on and off campuses. There was also a call for women students to be issued with free portable alarm lanyards.

Where women would otherwise have to go home alone, the union wants colleges to provide adequate secure overnight accommodation. Halls and flats should provide women with rooms above ground level.

Student organizations were urged to provide free classes in self-defence and to continue a campaign against films and other entertainment which is thought to provide encouragement for rape.

Speakers in the Margate debate emphasized that concern was not confined to areas associated with the Ripper's attacks. A Leeds delegate said: "The sick individual who murders women in the North is just one example of the sick society which does not regard 51 per cent of its members."

There was considerable dissatisfaction with the aid and advice given by the police—in particular, the warning to women not to go out alone after dark. Ms Mandy Watkins, of Birkbeck College, London, said that evening lectures made this impossible and would not ensure safety in any case.

"Elizabeth I had the right idea about this", she said. "When there was violence she told men to stay off the streets, not women."

The call for a woman to be allowed to defend herself "by whatever means she deems necessary" was defeated after claims that the carrying of weapons would backfire on and could lead to unnecessary violence. Ms Nicky Edwards, of Newcastle University, said: "NUS has never supported people in breaking the law. In any case, carrying a weapon does not make it any less likely that you will be attacked."

Police in South Yorkshire have issued students with a leaflet entitled *Street Safety or Night*, which includes a list of everyday articles which can be used as defensive weapons. It advises women to carry combs, ballpoint pens or perfume sprays for the purpose.

● A second emergency motion expressed concern about attacks on students by members of the British Movement, an avowedly Nazi organization. It was said that attacks had taken place at Essex University and in Paddington, London, and that students were now afraid to use public transport in the capital.

Funds change condemned

The new method of funding student unions directly through the budgets of their colleges was roundly condemned by the conference as a challenge to their rights and a threat to their independent existence.

A motion proposed by the executive and overwhelmingly supported said that new methods had been introduced at ridiculously short notice and without adequate consultation. The new method would make unions competing with academic bodies for funds, and were "a ready-made recipe for conflict across university and college campuses".

Calling for a one year delay in the implementation of the new system, the NUS said that it was essential for the Department of Education to hold annual local and national guidance.

An amendment from the extreme left describing the union's tactics of negotiation as a recipe for failure, was defeated. It rejected any external constraint on student union activities and called for direct action and "mass mobilizations".

A call for a national fees strike in protest at new levels of fees for overseas students was rejected in favour of a renewed campaign including days of action and lobbying. Miss Julie Richards, of Brighton Polytechnic, told delegates that fees strikes had been successful at local level and would not endanger the status of overseas students if properly supported. If the union did not take strong action this year, it might be no overseas students to defend.

Delegates agreed to hold a collection for relatives of those on hunger strike in Northern Ireland and to warn students from Catholic countries. Mr Alan Watson, that the conference could go to Republican organizations such as the National Troops Outside Ireland Committee (NTOIC) to declare its support for the hunger strikers' demands for special category status as political prisoners.

Leader warns on violence

Two members of the NUS executive had received death threats because of the union's refusal to take sides in Northern Ireland, Mr David Aaronovitch, the NUS president, revealed in his opening address to the conference.

He told delegates that NUS members studying in Ulster had to be helped to overcome the enormous difficulties of studying in a climate of violence. But the NUS would not be able to help if it decided that violence was an outrage if perpetrated by one side, and a "political act" when the other side used it.

In a wider attack on violence, Mr Aaronovitch warned that students would not be immune from the "forces of violence and fragmentation" that were at work elsewhere in society. Students appeared to be regarded as legitimate targets for attack by fascist movements like the British Movement. And campuses had become targets for sexual attacks on women.

Depth of militant feminism.

A firm grip on left-wing militancy

The winds were so strong in Margate last weekend that taxi-drivers needed to keep a firm grip on their car doors to prevent them being blown off and dumped on the sands. For the NUS, returning forlornly to the south coast after being priced out of Blackpool's Winter Gardens, it was an appropriately sombre setting.

David Aaronovitch, the union's 26-year-old communist president, also had to keep a firm grip on his members to stop them being carried away by a gust of left-wing militancy and dumped in the political wilderness. This would have happened if some delegates had succeeded in persuading the million-strong NUS to align itself with the Republican hunger strikers and the Provisional IRA.

Both sides played fairly rough. Aaronovitch squeezed in a sneaky first shot by using his opening speech to condemn political violence from both left and right. He also revealed that two members of the NUS executive had received death threats from Irish extremists.

But the other side also won its small tactical victories. One was the success of a motion put up by the extreme left wing paralleling the conference to raise funds for the hunger strikers. After an emotional address by Mrs Margaret Nugent, mother of a prisoner in Armagh gaol, delegates contributed nearly £175.

A surprising degree of controversy was also generated by the latest murder of a Leeds University student by the Yorkshire Ripper. Students were united in condemning sex attacks but divided on how women could best defend themselves. A motion to support the carrying of weapons by women was defeated, but the NUS is to campaign for better campus security.

Male delegates appeared unmistakably overawed by the depth of militant feminist feeling among the women. The New Puritanism had already made itself felt in Margate before the conference began, with a local cinema bowing to NUS pressure to withdraw a pornographic film, "Dressed to Kill".

Jeers greet Tory speakers

Conservative students speaking in support of the Government had to shout against a barrage of heckling, jeers and the stamping of feet during a debate on economic policy.

The Conservative motion said that only by curbing inflation would Britain be able to compete, and claimed there were encouraging signs that the Government's policies were already bringing inflation down.

Proposing the motion, Mr Barry Wood, a member of the Federation of Conservative Students, told jeering delegates that member colleges were beginning to support policies that supported Mrs Thatcher.

"You have to realize that your ground is slipping away from under you", he said.

But both the Conservative motion and those put up by extreme left groups were defeated in favour of an executive-backed resolution deploring the cuts in public expenditure and pledging the NUS to a campaign of peaceful and legal protest against them.

The defeated amendment proposed by the extreme left would have committed the NUS to support "both physically and financially all strikes whether official or unofficial".

But despite the success of the executive's motion, Mr David Aaronovitch, the president, was censured by the conference for failing to pursue opposition to the government sufficiently vigorously.

In his defence, Mr Aaronovitch said that the NUS did not have the resources to do everything. "If you pass a motion telling us to defy gravity we still will not be able to do it because we do not have the resources or the capability", he said.

Conservative ranks split in loans versus grants row

A major split in the ranks of the Federation of Conservative Students came to the surface when Tory delegates voted overwhelmingly to defy official policy in favour of student loans.

There were calls for the resignation of Mr Peter Young, FCS chairman, at a late-night meeting which rejected the national committee's pro-loans policy by a ratio of almost 10 to 1. Mr Young later claimed that representatives of other political groupings had swollen the numbers.

At a press conference the following morning the two Conservative members of the NUS executive, Mr Chris Bones and Mr Mark Wedding, accused their national committee of acting undemocratically in adopting the policy without reference to the federation's annual conference and in contravention of its previous stance.

Support for loans had damaged the credibility of FCS among students, they said, and was endangering the foothold Conservatives had gained within NUS. As a result, three of the federation's regions had published a poster disassociating themselves from the policy and resisting the case for grants.

Mr Young was reversing the trend of recent years of adopting a pragmatic approach to student issues and relegating the importance of ideology, Mr Bones said. There were fears that he would do still more damage by resurrecting the discredited notion of voluntary membership of student unions and try, despite commitments to the contrary, to persuade Tory-influenced unions to leave NUS.

The FCS statement in support of loans was agreed at a meeting of the national committee in October because of new interest in the subject arising from the DES feasibility study. Although previous policy had been anti-loans, it had lapsed and, in the absence of debate on the issue at recent FCS conferences, the committee was entitled to start afresh.

Tory split revealed by Young and Bones.

Mr Young's opponents on the committee claim that their meetings merely rubber stamp prior decisions of the majority group. Those of those dissenting from the new loans policy have been asked by Mr Young to resign, allegedly on the grounds that their public opposition would embarrass Dr Rhodes Boyson, under-secretary for higher education, who is carrying out his own investigation of the feasibility of introducing loans.

Later, Mr Young said he had asked the three to resign because they had flouted the convention of collective responsibility by issuing statements in the press before FCS members had been informed of the policy.

Although a large majority of the Tory delegates to the conference were opposed to the policy, this was to be expected since only the left of FCS participated in NUS affairs, he said. He believed there would be a different result when the subject was debated at a full conference of the federation.

Mr Young denied that he was restarting a campaign for voluntary union membership and said that advice to unions in financial difficulties to consider disaffiliation from NUS was intended to force the national union into more moderate policies.

Grant claim linked to inflation

There was a narrow majority of the conference for acceptance of the executive's proposed grants claim of a 21 per cent increase to allow for inflation over three years.

In their annual grants memorandum, the executive had argued that the Government had ordered increases at below the level of inflation for the past two years and should now restore the 1978 value. This would mean a claim for £2,050 for undergraduates in London and £1,740 elsewhere.

But it encountered opposition from both ends of the political spectrum. Conservative students wanted the annual increase kept to single figures, while the larger far left groups argued for the grant to be restored to its 1962 value, which was said to be £2,500 for undergraduates.

In accepting the executive's memorandum, which also included a claim for postgraduate awards to rise by more than 21 per cent to £3,173 in London, the conference also pledged itself to determined opposition to any introduction of loans. Not one college had tabled a motion sympathetic to loans and the only argument was over tactics for opposition

Motions calling for a militant campaign of occupations and refusal to enter discussions on the subject with ministers were defeated after Mr David Aaronovitch, NUS president, had warned delegates that the only means of resisting loans was to persuade backbench Conservative MPs to reject their introduction.

EP MICROFORM LTD.
Academic Publishers of Microfilm and Microfiche

The British and Foreign Bible Society
The British and Foreign Bible Society, founded in 1804, was one of the most successful of the Evangelical Societies of the early 19th century. Publication of the Minutes of the Committee, 1807-1914 comprises the first stage of this microfilm project, intended eventually to encompass the most important items contained in the Archives and Library of the Society.

South American Missionary Society
The Society was originally founded in 1844 as the Patagonian Missionary Society and this microfilm collection covers the period from its initial work in the southern part of South America to the end of the First World War, by which time the work and records of the Society had come to cover much of the sub-continent. Material includes manuscript diaries, minute books, and the South American Missionary Society Magazine 1867-1919, together with reports.

The Church Army Gazette, 1888-1914
The Gazette, a Gospel paper for the working man, records the development and expansion of an organization within the Church of England which is still active today in the field of social welfare.

Reel details and other information for these three new titles will be sent on request.

East Ardsley, Wakefield WF3 2JN, Yorkshire, England.
Telephone: Wakefield 823971

Peter David and John O'Leary report on last Friday's conference on the Select Committee

Price predicts a decade of crisis

Higher education faces a crisis lasting the entire decade because of the need to correct the system, Mr Christopher Price, MP, chairman of the Select Committee on Education, told a one-day conference in London.

For this reason he had favoured the approach of "gentle modesty" adopted in the committee's report on the funding and organization of courses in higher education, rather than the more radical proposals he might have supported in other circumstances.

He told the conference on the report: "We were in no doubt that each year of this decade is going to be a real crisis year because nobody knows how to contract. We have had 20 years' experience of expansion but no one in the western world knows about contraction.

"The fact that we did not use very much tougher language about the prospects for the next few years does not mean that we were not aware that there are going to be appalling problems."

In reaching relatively moderate conclusions the committee had taken into account political reality both in Parliament and within higher education. The likelihood of acceptance was one of the main criteria by which members had judged proposals.

The recommendation that the Government should set up a Committee for Colleges and Polytechnics illustrated this, since the committee had stopped short of proposing a funding body on the lines advocated in the Oakes Report. Mr Price accepted the criticism that the new group would be different in kind from the University Grants Committee and might find transhumancy co-operation difficult initially for that reason. However, he believed that the CCP would acquire de facto power as financial stringency increased.

"I agree the UGC and the different kinds of bodies, will find it difficult to have an equal partnership", he said. "But if we are moving into a decade when quite horrible decisions will have to be made, then a really powerful Government appointed CCP will be on all fours with the CCP."

Members of the committee had deliberately avoided setting out detailed plans for the CCP or other bodies, Mr Price said. "If we had spelled everything out we would have loaded our opponents with even more ammunition", he added.

Mr Patrick Cormack, the senior Conservative on the committee, said he did not believe it was the job of politicians to provide answers to everything. The committee had aimed to create a climate in which those with greater educational expertise were able to act.

Fifth Festival Hall Conference on Higher Education 1980

THE FUNDING AND ORGANISATION OF HIGHER EDUCATION COURSES

The Select Committee's Recommendations and Future Policy

Management of decline as a growth industry

by Peter Scott

A one-day conference on London South Bank was hardly qualified to come to grips with the complexity of the Select Committee's report on the funding and organisation of higher education, with its 46 detailed recommendations on everything from the age participation rate to fees for Greek students.

But the conference, which was organized jointly by the North East London Polytechnic and Warwick University in association with *The THES*, was enough to expose three important features of policy formation at the beginning of the 1980s.

First was the sibling interest in higher education policy, even though these days its ingredients are bad news and financial austerity rather than expansion of students and money. The organizers had expected about 100 participants but in the end almost 250 turned up. As usual the polytechnics and colleges were much better represented than the universities, but this bias was corrected to some extent by the presence of two current and two former vice-chancellors (despite a closing CVCP meeting) and by the participation of Mr Geoffrey Caston, the CVCP's general secretary.

Second was the almost incandescent fear of the future. At times the conference seemed to be concerned not so much with the debate of the Select Committee report but with the larger and menacing question of how to manage contraction or at least to cope with steady state after two decades of expansion and (comparative) plenty.

Mr Christopher Price MP, the chairman of the Select Committee, even encouraged this mood when he reflected that no one in Britain had had any experience in the management of decline and predicted terrible times ahead. The professional responsibilities of scholars not to exploit their comparative autonomy but to evaluate rigorously the value of their work was also the theme of the address by Professor Robert Berdahl from the University of Maryland.

The third feature was more positive and in the long run more significant than pessimism: it can be summed up in a simple sentence—there are all pluralists now. In its ambivalence to the binary policy the Select Committee seems to have touched the prevailing mood within higher education. Not a single person at last Friday's conference was prepared to stand up and be counted as the unreconstructed supporter of the binary policy.

It was a vindication of the views of Lord Robbins, the oldest supporter of the binary policy of all, who opened the conference. He stated flatly that the Crosland policy had been a disaster, placing most emphasis on the contraction effect it had had on the universities. There was no "Robbins Miracle" from the DES to contradict him.

Contrary to the hopes of organizers it was not a participatory conference. Most people had come to listen rather than to proclaim their views, perhaps in keeping with the sombre mood. But it was apparent that the main theme of the Select Committee report, the move to pluralism, had captured the changing mood of higher education. However, little progress was or perhaps could be made in a week on the second stage, defining that pluralism.

Lord Robbins: hard words for the DES

US professor warns against sloganizing

There was no real threat to academic freedom in Britain and academics should be wary about using it as a slogan to resist necessary changes, Dr Robert Berdahl, professor of higher education at the University of Maryland, told the conference.

He said it was important not to confuse academic freedom—the right to pursue truth and knowledge—with procedural interventions in university autonomy. The procedural controls governments liked to apply were merely irritants, and the erosion of institutional autonomy was inevitable as the higher education system became bigger and more complex.

Financial austerity and demographic decline were bound to increase pressures to make higher education more accountable, Dr Berdahl said. All the portents were that business as usual in higher education could not continue.

Academic staff would have to play a crucial part in making changes possible. "It is putting your heads in the sand to pretend that difficult and painful decisions do not have to be made."

Dr Berdahl said it may be that universities would be unable to adapt by themselves. The fat had been squeezed out of the universities and it would no longer be right to make across-the-board cuts.

But experience in the United States had shown that an essential part of introducing change was to persuade the academic community that it was necessary, he said. In Britain this would be more difficult because the DES had never actually had the power of appointment.

Planning should not be done by a few central bureaucrats throwing out decisions to the public for post-hoc discussion. There appeared to be very few public debates in Britain. "The ongoing organs of public policy debate just do not seem to exist here."

'The worst possible funding system'

Ministers could not have produced a worse funding system for higher education if they had tried, Lord Robbins told the conference. Prestigious institutions were facing acute financial embarrassment as a result of successive Government policies.

"I do not myself think that the problem need have been the important and dangerous subject that it has become", he said. "As things have turned out, the Department of Education and Science has made the worst of a difficult job."

The binary system had turned out to be a disaster, leaving the public sector institutions without even the protection of a buffer like the UGC between them and the local authorities and the DES. He welcomed the proposal for a Committee for Colleges and Polytechnics but warned that its powers would have to be very carefully worked out.

Lord Robbins complimented the committee on a "thought provoking and entirely admirable report", although he felt that the inquiry should have been widened to include the content of higher education at institutional level.

His own report, in 1963, had hedged on the question of student loans because the committee was divided. He now believed that the two most crushing objections to loans, the load on lowly paid graduates and the difficulty of collection, could be overcome by linking repayment to income tax.

The university system, with its emphasis on early specialisation, again came in for harsh criticism from Lord Robbins. It was designed to produce dons and was not the most suitable system overall.

Such early specialisation, starting from the stage of O-levels, did not exist anywhere else in the civilized world and did not exist in his youth. Then there had been no stigma attached to general degrees and the system was better attuned to the needs of society.

V-c's plea for working class students

New initiatives in higher education should concentrate on attracting more students from working-class homes and more women, Mr Jack Butterworth, vice-chancellor of Warwick University, said.

The expansion of the system had been extremely successful on the whole but had failed to tap the "pool of ability" in the poorer sections of the community referred to in the Robbins Report. Slow movement in the direction had now been reversed and Disraeli's concept of two nations remained valid.

Women represented another reserve of untapped ability and universities would also have to become increasingly involved in continuing education. However, for them to do so, the University Grants Committee would have to change the formulae for the allocation of recurrent grants.

"We do not need directions or bureaucratic instructions to tell us", Mr Butterworth said. "What we need is a formula for our financing freeing us to get on with the job."

Funding difficulties were also restricting the universities in the field of research, he said. Basic conditions for researchers are inadequate compared to those in some European countries or the United States and it was to be hoped that the report of the Merrison Committee would restore the efficiency of the dual funding system.

Mr Butterworth welcomed the approach of the Select Committee, considering higher education as a whole. But he deemed dangerous the recommendation that institutions should produce regular statements defining their role on the grounds that this would limit flexibility.

He also raised doubts about the establishment of a joint secretariat for the proposed Committee for Colleges and Polytechnics and the UGC. A national body was needed for the public sector, he said, but a single central secretariat might lead to over-centralized planning.

Dr George Brosan, director of the North East London Polytechnic, also favoured new planning machinery, which should be set up urgently before more institutions closed. There was 2S per cent over capacity in higher education, he said, and some good institutions would go down with the bad if there was no direction.

Jack Butterworth: "untapped pool"

Withering attack on 'immoral' closure policies

The relative merits of local initiative as against central planning was one of the main issues raised during a panel session of the conference.

Dr George Tolley, principal of Sheffield Polytechnic, said it was the vitality of individual institutions which would determine the vitality of a responsible system, and not the other way round.

Both the University Grants Committee and the local authorities had done well for their institutions during expansion. Now that contraction was coming, we should look at what happens within institutions and how to change them, rather than concentrating on the system.

Mr Hugh Harding, former DES under secretary, said a weakness of the select committee report was its implication that by relying on student choice to determine the shape of the system, hard decisions could be avoided.

The proposed CCP did not have strong enough terms of reference. It would have to devise a system and operate it "sometimes fairly ruthlessly".

Mr Geoffrey Caston, secretary general of the Committee of Vice-Chancellors and Principals, said one tragedy of the situation in higher education was that our binary system invited people to "put up fences in order to shoot at the other lot".

However, those sitting in common rooms at Oxford or Cambridge were making the same remarks about Stirling and Essex universities, for example, as others made about the polytechnics.

Mr John Barnett, the research and information officer of the college principals' group, the Standing Conference, was especially critical of the motion of allowing colleges to close gradually through "withering on the vine". It was immoral to single out institutions for closure but then to pretend that they were being given an equal chance of survival simply because no new national policy on closures was being propounded.

Those which were being allowed to wither on the vine were being inadequately funded and were unable to launch the programmes which they believe would bring their salvation. It would be more responsible for the Government to publish another list of closures.

Three members of the panel supported the proposed establishment of a Committee for Colleges and Polytechnics, although all had doubts about its effectiveness as a non-funding body. Mr Caston said that it was the allocation of funds which gave the University Grants Committee its teeth and it was hard to see how a committee for the public sector could work properly without similar powers.

Mr Eric Robinson, principal of Bradford College said the more he heard in favour of the select committee's report, the more worried he was. The select committee, by accepting its terms of reference, concentrated on unifying higher education and neglected schools, adults and continuing education. The binary debate was all about the dangers of separating higher education from the rest of the education system.

Mr Price accepted the criticism and said the danger was that talking about higher education as a separate entity would freeze it in its present position. He hoped it would be possible in the future to mesh higher education with the work being done on further education by other select committees.

Professor Naomi McIntosh of the Open University, said that although more women were entering higher education, it would be necessary in the next 10 years to ensure that they go through further training and promotion.

"It is just becoming a little tedious listening to all these apologies yet knowing that all of you are the gatekeepers of the present system", she said.

Nor could she agree with Mr Butterworth that all universities agreed on the importance of continuing education. Conventional universities were failing to make the opportunities available for mature students, and that was not just because of financing difficulties but also because of attitudes.

Dr George Brosan said that polytechnics tried to do the best they could for mature students, but the disincentives were "absolutely tremendous".

Mr Stephen Brass, vice-chancellor of Brunel University, said the problem for the universities was how to combine stability with flexibility. He said one answer could be to have buildings and salaries held for from a central grant, with universities retaining their fees to provide for initiatives.

It might also be logical to have a single national body dealing with full-time degrees, and a separate regional organization providing grants for local courses.

North American News

Universities in patent rights fight

Universities have won their campaign to keep all patent rights for inventions made with federal research grants.

Congress has passed legislation giving the United States' patent law, which will allow universities or small businesses to retain title to patents resulting from federally funded research.

A uniform government-wide system is to be instituted in place of the present administrative chaos under which 24 different and often contradictory patent policies co-exist in different federal agencies.

Two agencies, the Department of Health and Human Services and the National Science Foundation, are required to negotiate agreements allowing universities to keep patent rights, but they have to be worked out individually with each institution.

The academic and small business lobbyists used the current political concern about America's declining rate of industrial innovation and productivity to convince Congress. They argued that many good potential patents by the government were never published because no company was willing to incur the costs of development and marketing without the protection of an exclusive licence. If a university retains title, however, it can grant a firm exclusive rights to exploit the patent, in exchange for royalty payments.

Niels Reimers, director of technology licensing at Stanford University, thought the reform would be particularly helpful in accelerating the transfer of new energy technology from university laboratories to the marketplace. The Department of Energy has been extremely reluctant to release patent rights to processes developed through its research grants and contracts.

Norman Latker, former patent counsel at the Department of Health, Education and Welfare and now with the Small Business Administration, believed the new law would have an important psychological impact on the relationship between companies and universities. "In the past it has not been clear to businesses what sort of rights universities had to their inventions, and the uncertainty often put them off approaching a university. In future they can be sure the university holds title to an invention", he said.

"In the same time passage of the bill will sensitize universities to the fact that patenting an invention can be worthwhile and helps the process of technology transfer", Mr Latker added.

Mr Latker's experience at the Department of Health, Education and Welfare (now Health and Human Services) convinced him that the invention was far more likely to be used if the university where it was discovered held the patent, rather than the government. Before 1968, when the department began negotiating institutional patent agreements with universities, only one third of all patents resulted by a university were developed into commercial products, compared with 75 such patents over the 5 years since 1968", he said, "we could find one example of an invention made with HEW support that had reached the marketplace".

The House of Representatives passed to extend the benefits of the new patent policy to government-sponsored research by large corporations as well as small businesses and universities. But the Senate insisted on excluding big firms because some senators, particularly Finance Committee Chairman Russell Long, did not like the idea of corporations making profits out of research paid for by the taxpayer. Mr Long said otherwise have killed the bill.

The legislation does allow the government some residual rights to inventions which it financed. It can march in and take over a patent if the owner has not made a reasonable effort to commercialize it. Government ownership will still be needed if that is deemed necessary for intelligence activities. And the government itself will be able to use any invention anywhere in the world without paying royalties to the owner.

Supreme Court to review women's draft

from Clive Cookson WASHINGTON

The United States Supreme Court has agreed to review the most far-reaching sex discrimination case ever—the constitutionality of registering only men for the draft.

The final ruling, which is not expected before the summer, will determine the immediate future of the controversial registration programme that President Carter and Congress reinstated this year. But its most profound long-term impact is likely to be on the constitutional rights of women.

The case has a legal history that is long and tortured even by American standards. It started with a lawsuit against the draft, brought by a group of anti-war students in Philadelphia in 1971. The courts had not settled the case when the draft and then registration were dropped as the United States withdrew from Vietnam. So the suit hibernated until this year, when Congress reactivated registration—but not actual conscription—at President Carter's request.

Then the case suddenly exploded, a week before registration of 18 and 19-year-old men started last July, when a special Federal Court in Philadelphia struck down the programme because it unconstitutionally excluded women. Supreme Court Justice William Brennan immediately stepped in and blocked the ruling, to give his colleagues a chance to review the issue, which they have now agreed to take.

President Carter did in fact ask Congress to include women in the revitalized programme, but it refused. If the Supreme Court agrees with the lower court that this sex discrimination is unconstitutional, Congress will have either to bring in women or see registration die, leaving the country without a valid mechanism for emergency military induction.

Political observers believe Congress would be extremely reluctant to make women enrol for possible conscription, and so would President-elect Ronald Reagan. During the election campaign Mr Reagan repeatedly stated his opposition to registration even for men; since his victory he has been more equivocal, saying he would review the programme after he assumes office next month. But he seems much less likely to continue it if he has to include women.

The whole case illustrates the extraordinary flexibility with which the courts have altered their interpretation of the often vague language of the American constitution, as social and political standards have changed.

A few years ago no one questioned the general presumption that only men were drafted, whatever the constitution may say about equal protection under the law. But during the 1970s the Supreme Court has progressively narrowed the grounds on which it will accept different treatment of men and women, so that the Federal Court in Philadelphia could find that male-only registration failed the test because it was not "substantially related to an important government objective".

During this period the wording of the Constitution has not changed. An Equal Rights Amendment (ERA), which would explicitly guarantee the two sexes equal rights under the law, was passed by Congress in 1972 but it has not been ratified by the required three-quarters of state legislatures and its prospects of becoming part of the constitution are poor.

Not surprisingly, the traditionalists and anti-feminists who have fought so hard against ERA are outraged by the possibility that the Supreme Court might insist on a draft for both sexes. Their leader, Phyllis Schlafly, said that would be tantamount to judicial enactment of an amendment that could not be ratified by the proper democratic process.

"If the court goes wrong on this issue, if it puts the ERA into the Constitution, . . . it will be the greatest example of judicial arrogance in recent times," said Mrs Schlafly. "We are already lining up votes in Congress to withdraw the courts jurisdiction over this issue and I think we can do it." (If so, the Supreme Court might reject an act of Congress that removed its authority to decide important constitutional questions, leading to a great constitutional clash between the legislative and judicial branches of government).

Supporters of the equal rights amendment would welcome a Supreme Court ruling that women must be included in registration and the draft. It would underpinned one of the chief arguments of their opponents—that ERA would lead to a female draft—by making clear that women would have to be conscripted with men whether or not the amendment is passed.

However, the American Civil Liberties Union (ACLU), which is primarily responsible for the lawsuit, is not really prosecuting its case in order to promote women's rights. It sees it more pragmatically as the best way to remove the threat of a peacetime draft.

The Carter administration's lawyers have had a hard time preparing a defence for the exclusion of women having originally pressed for their inclusion. But they have come up with a plausible two-pronged argument: First, sex discrimination in military matters does not need to be subject to such strict scrutiny as in other spheres; secondly, since women are not permitted in active combat, "military flexibility" requires registration and the draft to be restricted to men.

However, the challengers persuaded the judges in Philadelphia that women would in fact be needed, in only non-combat supporting roles, in a military emergency, so they should be drafted too.

. . . and Seattle waits on appeal

In another sex discrimination case of great interest to higher education—though less fascinating to the world in general—the Supreme Court announced that it will review the authority of the Federal Education Department to regulate the employment practices of colleges and universities.

Specifically, it will hear an appeal by the Education Department against a ruling by two lower courts that it cannot enforce regulations prohibiting employment discrimination against women at Seattle University.

The Jesuit-run university persuaded the lower courts that the department exceeded its congressional authority by investigating complaints that faculty members in the school of nursing—all women—were paid less than their counterparts in other departments. The institution argued that Congress was thinking only of students, not of employees, when it passed the 1972 Education Amendments, outlawing sex discrimination in federally supported education programmes.

Many other colleges and universities feel that the government has interfered far too much with their employment practices—backing up its regulations with the threat that federal funds will be withdrawn from institutions that do not comply. So they will be delighted if Seattle University wins its case and the Supreme Court makes clear that affirmative action for women faculty members is a university's business and not Washington's. Lower courts have given contradictory opinions in similar cases over the past couple of years.

Why Dr Slaughter waited to be first

from our North American editor

John Slaughter has been sworn in as Director of the National Science Foundation, putting an end to speculation that he was having second thoughts about taking charge of the federal agency responsible for basic scientific research.

Dr Slaughter, an engineer who is the first black to hold a major science post in Washington, said he delayed his formal assumption of the NSF directorship because he needed to see through his administrative commitments at Washington State University, where he was academic vice-president and provost.

"I have talked with people in the future Reagan administration and I have no reason to believe I even need to be concerned about relationships with the incoming government", Dr Slaughter told a meeting of the Council of Scientific Society Presidents. President Carter persuaded him to take the job last summer, although he was reportedly reluctant to take it then.

Dr Slaughter made clear his determination to increase substantially the NSF's support for engineering and technology, at the same time trying to reassure pure scientists that they would not suffer in the process. "The support of basic research remains the central mission of the foundation", he stated.

America's engineering societies have been increasingly critical of the foundation's alleged neglect of their interests. To meet some of their criticisms and head off their pressure on Congress to create an independent National Engineering Foundation, the National Science Board (the foundation's policy-making body) approved an internal reorganization shortly before Dr Slaughter took over, which will set up a separate engineering directorate within NSF.

The president-elect appointed a 15-member "science and technology task force" headed by industrialists Arthur Bueche and Simon Ramo, which contains only one university faculty member and two figures from the medical and biological fields. Its membership is drawn mainly from the military aerospace, nuclear and electronics industries.

No one knows what influence the task force will actually have on the new administration's science policy, but its industrial domination suggests that Mr Reagan will shift resources away from long-term basic research especially in the biological and social sciences, towards short-term applied science and technology; military research and development should do particularly well. A further clue will come when the president-elect chooses a science adviser to replace President Carter's man, Frank Press.

Dr Slaughter spoke to the Scientific Society presidents of the "crying need for better support for this nation's engineering universities, particularly in terms of helping those universities develop better facilities, research instrumentation and facing up to the issues of a faculty which is becoming fully tenured", industry was luring away bright engineering graduates with salaries that could soon be double those in university departments, he said.

Dr Slaughter brought up his personal interest in promoting blacks and other minorities in science and engineering. He said he was "personally very concerned about the sorry state" of their involvement in American science, and told his audience of white male Scientific Society presidents: "I think you need to be concerned about it. I think if you look about this room you'll realize that participation of minorities and women at a meeting such at this is by no means anywhere near their presence in the overall population; it means that you cannot ignore it."

The National Science Board decided against a proposal to create a separate NSF directorate for social and behavioural sciences, which are now in with biological sciences.

There were also political reasons against isolating the social sciences, which are likely to be prime targets for the Republicans' budget cuts.

However the board did agree to reorganize support for applied sciences, which will be distributed amongst the various NSF directorates and will no longer have a home of their own.

Dr Slaughter has made clear on a number of occasions his dislike of what he believes is often an artificial distinction between applied and basic science. He believe the foundation should support "quality science" whether it is applied or basic.

Dr John Slaughter: a future with Reagan.

An eloquent Third World voice

TOWARDS A NEW INTERNATIONAL ECONOMIC ORDER

Mohammed Bedjaoui

This book challenges traditional concepts of international law. Arguing that traditional international law has served the interests of rich nations, Dr Bedjaoui, Algerian ambassador to the United Nations, shows how it has displayed a "dangerous indifference to the common good of mankind as a whole, resulting in wastage, reckless over-exploitation of natural resources, destruction of the environment and unfair distribution of wealth." He suggests ways to ensure the development of an equitable law.

"Mohammed Bedjaoui has produced an exciting and convincing account of why international law must be drastically reshaped to serve the altered character of international life"—Richard Falk, Princeton University.

First in a new series, "New Challenges to International Law", sponsored by Unesco.

287pp, £14.95 cloth, £8.00 paper.

HOLMES & MEIER PUBLISHERS
131 Trafalgar Road, Greenwich, London SE10 9TX

Clive Cookson,
North American Editor,
The Times Higher Education Supplement,
National Press Building,
Room 541,
Washington DC 20045;
Telephone: (202) 638 6765.

Polish sit-in calls for legal union status

A sit-in by students of Warsaw University, staged on the fringe of the Narozniak affair, has focused on the main problem facing the new independent Polish students' unions—how to register as a legal entity.

The sit-in took place during the tension produced by the arrest of the "Solidarity" printer Jan Narozniak, for allegedly disseminating a secret document detailing official plans for dealing with activists. However, while demanding the release of political detainees, the students' main grievance was their own lack of union status.

Polish law grants the right to form trade unions independent or otherwise, only to employed persons or, in the case of pensioners, former employees. Freelance writers, artists, students and private farmers are not eligible although Poland's desperate need to revitalize its agriculture suggests that the farmers may be granted special status in the near future.

Even without registration, the new independent students' association of Warsaw University is already a viable body. Its most significant achievement to date is the organization of Friday evening lectures, in the Adam Mickiewicz Hall (the main hall of the university), whose audiences flock to hear such controversial topics as "The form and content of the social contract in Poland", and the "Rising of November 1830" (against Russian rule). Challenged that all the lecturers so far have come from the still-banned "Flying University", one of the student organizers told the authorities that he was astounded at the coincidence.

With the Ministry of Science, Higher Education and Technology now working on plans to give the universities greater autonomy, which would include student participation in university government, the need for legal status has become acute if the participation is not to be confined to representatives of the depleted Socialist Students' Association.

When on November 26, the representative of the Ministry of Science, Higher Education and Technology broke off talks with the "independent" students on the grounds that he had first to consult with the socialist students, the "independents" decided to stage a "limited sit in", with 200 students occupying the main university building.

Mediation efforts by the rector, Dr Samsonowicz, were of no avail, and on November 28, a commission from the ministry, led by the minister, Janusz Gorski, himself, was called in. The sit-in was finally called off at 10.00 pm that night.

A later communiqué from the students' action committee states that they abandoned their protest only in response to the appeal for restraint issued by "Solidarity" to the country at large.

Calling off the sit-in, they say, does not mean that they accept the status quo. Although the ministry has proposed new regulations on student associations, to come into force on December 20, their other demand, for a national congress of independent student associations has been turned down, as has also their request that their demands be published in the press. Minister Gorski, they conclude, has shown a marked "lack of understanding of the needs of students".

South African students back 'selective' boycott

from Howard Barrell

JOHANNESBURG

The National Union of South African Students (NUSAS) called for a selective academic boycott of South Africa at its annual congress in Johannesburg last week.

NUSAS, the largest non-racial umbrella body for South African students, which has traditionally found itself on the legal left of South African politics laid down two conditions in terms of which foreign academics' presence in South Africa would be acceptable.

The first was that foreign academics should make a "progressive input" into the society; the second that their intentions and research should be consistent with serving "the needs of the majority of the people".

Noting that many "progressive foreign academics boycott South Africa at present", NUSAS called on them to reconsider their stand and to support a selective boycott of the country in line with the conditions it had laid down.

The organization accused the South African government of presently using some academics for "propaganda and what it termed "control" purposes.

The 100-odd delegates and observers at the congress also hit out at the South African Medical and Dental Council (SAMDC), the licensing and disciplinary body for doctors and the Medical Association of South Africa (MASA), the medical profession's representative body, for the inadequacy of their reaction to the death in detention of black leader Steve Biko and their failure to take appropriate action against the doctors who had treated the detained Biko.

Black students are reassessing their exclusivist thinking.

NUSAS alleged the SAMDC and MASA were "institutions which serve to maintain the status quo in an unjust and undemocratic society".

SAMDC and MASA inaction had "exposed the inability of the South African medical professsion as a whole to adhere to its ethnics and codes", NUSAS added.

The congress confirmed the drift noticeable in recent years away from liberalism and towards a socialist position among the active membership of NUSAS.

Analysis of South African society was overwhelmingly structuralist in form, with the country's capitalist economy being presented as the basic determinant of the South African conflict.

A notable feature of the congress was the renewed interest shown in it by black students—12 years after they broke away to form their own seperate organization, the (now banned) South African Students Organnizsien (SASO), in line with the black exclusivist thinking of the time.

While the black presence at the congress was at all times small, occasionally even furtive, the fact of the presence is significant. It coincides with the most critical re-assessment of the black exclusivist phase in black consciousness thinking since the formulation of the philosophy in 1968 by Biko and Barney Pityane (in exile, studying theology at London University).

The appeal by a prominent local political trials barrister, Mr George Bizos, for all South African students, black and white to re-unite in NUSAS is highly unlikely to happen in South Africa before the political power relationships have changed. But his appeal did not fall on deaf ears.

Student sources tell the *THES* that contacts between the leadership of NUSAS and the black exclusivist, student-based Azanian Students Organization (AZASO) and scholar-based Congress of South African Students (COSAS) are stronger than at any time since the latter two's formation about three years ago. Detention or harassment at the hands of the security police is an experience common to all three leaderships.

Dortmund demo to stop closures

from James Hutchinson

BONN

The vice-chancellor of Dortmund University, senior members of the staff and several thousand students staged a demonstration to protest against economy measures which are threatening the closure of several courses.

Dortmund, with 15,000 students, has been particularly badly hit by cuts in West German university spending. Construction of extensions to the university, which is greatly overcrowded, has been stopped, and there is not enough money available to engage more staff.

One department, *Informatik*, which teaches a variety of subjects concerned with industrial management, has twice as many students as it was meant to cope with. Its staff consists of only 10 professors, although its complement is 24. The length of the courses should be nine half-year terms, but has had to be extended to 13 or 14. Students are having to queue for up to 18 months to take their final examinations.

The department of statistics should have 14 professors, but because of lack of funds has been able to appoint only six. The programme of lectures has been drastically shortened. Many departments are waiting for buildings to be completed and in the meantime must not be housed under one roof. The medicine/engineering faculty has been promised a new building since 1973, but it is now feared the architect's plans will have to be scrapped.

One of the departments of the college of education, to commend into an old school built for 300 pupils. But the plight of people studying sport is probably the worst of all: they have no centralized facilities, and are scattered around 15 sports stadiums in the Ruhr area.

Dortmund University was founded not quite ten years ago with the express purpose to the challenge of structural industrial change. About 22 per cent of Dortmund students are the children of industrial workers, which is the highest proportion at any university in the country.

Kenyan college expels strikers

Thirty-nine of the 800 second-year students at Kenyatta University College, part of Nairobi University, have been expelled for allegedly leading the strike which resulted in closure of the college last month.

First and third-year students were readmitted when the college reopened last week, and the remainder of the second year students have been instructed to report on Friday, December 5.

A statement from the principal, Mr Joseph Kihanda, said the 39 students had been expelled for misconduct. The other second-year students are required to submit a written apology and to undertake to adhere to all rules, and not to disrupt the normal functioning of the college in future.

They are all studying for the bachelor of education degree or associated teaching qualifications.

French protest against senate poll reforms

from Guy Neave

PARIS

A massive turnout in protest against the reform of university senates has been called for today by the major French student unions.

Introduced last summer by Senator Jean Sauvage the reform increases professorial representation to 50 per cent of the total. Bitterly opposed by both non-professorial staff unions and by students, the new legislation has however been implemented only with considerable slowness.

Even so elections for membership to the new senate must be complete by December 15. All signs are that the hitherto united front between staff and students is breaking up.

The major lecturers unions are beginning to show differences in attitude towards this new development. Among the hardliners in the *Syndicate Generale de l'Education Nationale*, a union affiliated to the non-communist *Confederation Francoise du Travail-Democratique*, calls have gone out for a complete boycott on the coming elections.

"There can be no support for a law that allows 77 professors of the University of Nancy to elect 21 representatives while the 272 members of nonteaching staff are allowed to elect only two representatives to the university senate", said a spokesman.

Rather more hesitant is the line currently adopted by the *Syndicate Nationale de l'Enseignement Superieur* whose members form the bulk of the non-professorial teaching staff in French universities.

Anxious to keep its option open the syndicate has nevertheless instructed its members to refuse to organize the new elections. At the same time it recognizes that little success is likely to reward this tactic. Even so feelings run strong. At the University of Bordeaux teaching staff turned out in force to blockade election booths. While not preventing voters from taking part, the demonstration ensured that the total number of votes cast was mightily small.

Only 9 per cent of the electorate took part. Despite their determination to protest against the new legislation students are more preoccupied with the other issue of the hour—the withdrawal of validation from certain second and third cycle graduate programmes. The problem of finding a place on a similar course at another university though difficult is not insuperable especially in larger university towns.

The main problem is with the smaller universities. Students whose programmes have been abolished by the Ministry of Higher Education face the decision whether or not to transfer to another university often outside the region.

Such difficulties lie at the heart of the unrest that has been going on for well over three weeks in the small town of Perpignan in the southwest of the country. Faced with what many students regard as a policy of forcible emigration from the region student leaders have been well nigh continuous since November 12.

Despite sustained attempts to involve the local population in support of the university and to gain support from other universities in a similar situation Perpignan students are finding it difficult to rally support.

Robin McKie reports on a major new research centre at Braunschweig-Stockheim in West Germany

A biotechnology comparison that makes us blush

The fermentation room at the GBF.

But there is another crucial aspect to work at the GBF, the scientists there argue. The scale of the enterprise allows them to take a promising discovery, develop it, show that it is commercially feasible and then take its production to a semi-industrial scale. The idea is quite simply to try to force industry to take up their ideas, products and processes—a notion that makes interesting comparisons with United Kingdom universities and research establishments and their likely approaches to biotechnology.

One important aid in this programme is the development at GBF of sophisticated computer systems to control the delicate fermentation processes. Electronic sensors make careful note of bacterial growth fluctuations and the computers then attempt to control these by altering dissolved oxygen content, acid values and other variables.

In the end the aim will be to attach microprocessors to individual vats to carry out this process independently and provide industry with carefully detailed instructions and plans for taking each development from GBF ready for commercially useful production. If nothing else, it should make a fascinating marriage between the two now super-technologies of tomorrow.

Of course, producing large amounts of bacteria is only a means to an end. It is their constituent parts, particularly their enzymes, which interest scientists at GBF and those who use its facilities. Traditionally, enzymes have been used predominantly in food processing industries and have been obtained from natural sources, such as rennin in calf stomachs.

Now scientists have found that bacteria can be selected, or artificially constructed by genetic engineering techniques, to produce a complete range of new enzymes that could transform certain industries.

The Spinks report suggested that they could be a major factor in the development of clinical diagnostic kits, water analysis, flavour and perfume analysis, continuous monitoring of chemical processes and waste treatment. In medicine alone they could be used to treat chronic disorders and in-born metabolic problems, improve therapeutic proteins, and help in the oral treatment for detoxification.

But having selected, or made, the required bacteria to produce the enzymes to be investigated and having then grown them in mass, scientists still have to extract the required enzymes.

At the GBF, this is done on a typically large scale. First, when fermentation is complete, the bacterial brew is pumped from the vats into centrifuges below the main hall floor and there the dried mass of micro-organisms is separated from the accompanying liquid.

Then the enzymes have to be removed from within the bacteria by breaking down their cell walls. This can be done by subjecting them to high pressure or by rotating them in cylinders with tiny glass pearls. By calculating the right rotation speed and diameter of the pearls, scientists can control the sheer forces acting on the bacteria cell walls and break open their membranes, spilling out the intercellular enzymes within.

After that, comes the really tricky problem. How can you separate the bacterial debris, the cell membranes, the DNA and the enzyme you require? As one scientist at the GBF put it: "It is not just like looking for a needle in a haystack because you could use a magnet to find that. It is more like looking for one particular straw of a certain length."

The answer is a method known as the two-phase solubility system in which solvents of carefully controlled parameters, such as acid level and salt concentration, are used to dissolve the debris and other unwanted products to form one phase of solution, while the required enzyme alone dissolves forming another phase of liquid, and the two slightly different types of liquid are then separated.

It is a technique that requires an intuitive feeling on the part of scientists to select just the right variations in the solvents to induce the correct two-phase split between cell debris and the enzyme, and scientists at the GBF believe that German industry is still far too sensitive about using the technique. However, they believe the separation process could become critically important in the near future in preparing human interferon which the centre intends to start manufacturing using genetic engineering methods next year.

If such a goal is achieved, there is no doubt that German industry will not be allowed to sit back and idly watch it in pengrass. For although the GBF, which grew out of the former Institute for Research in Molecular Biology that was founded by the Volkswagenwerk Foundation in 1968, has been accused of not producing top class research, it certainly cannot be labelled an idle institution. While some research groups might sit back and watch their research results quietly waste, the GBF will, if nothing else, be making the most of what they have spent their time and money on.

Dutch pla[illegible] sweeping changes

from Lionel Cohen

Efficiency and flexibility [illegible] key objectives for Dutch education policy in the 19[illegible] the final report of the Ne[illegible] Committee for the Develop[illegible] Higher Education.

After 18 years' work, [illegible] mittee, chaired by Tilburg [illegible] logist Professor R. A. de [illegible] counts not strongly in favour [illegible] more closely integrated high [illegible] cution structure with "[illegible]" available for all potential [illegible]

There should not be [illegible] right of entry for qualified [illegible] but appropriate tertiary education facilities to match the needs of [illegible] declining entry, argues the committee.

It says that there is a need for both a system of selection at [illegible] point of entry into any [illegible] tertiary education and the [illegible] duction of a nationwide [illegible] for the granting of diplomas [illegible] successful completion of [illegible] "modules" in any combination [illegible] graphic than Britain was falling [illegible] badly behind the rest of the world [illegible] biotechnology, and nowhere was [illegible] comparison more clearly illustrated than with our near indus[illegible] which look, and smell, just like s[illegible] brewery. Even peering through the glass portholes on top of the vats gives a sight of a fermenting brew more reminiscent of the joys of alcohol production than Teutonic scientific effort.

Part of this impression stems from the scale of operations at Braunschweig-Stockheim. There are six tanks that can hold 660 litres of liquid, a couple that can take 900 and one that holds a massive 4,500 of fermenting bacterin-rich brew.

These microbes are grown in the same way as yeast, which feeds and multiplies on millions of hops and malt that are then converted into beer. But for brewers, the end product is alcoholic beverage. For scientists, the real interest lies with the mass of freshly grown bacteria, and particularly their associated enzymes, the specific proteins produced by living cells, which can be used to explore new research fields.

Why these students are the meat in the sandwich

Sandwich course students are currently facing one of the toughest practical problems ever set for them.

The sandwich system which pioneered in the 1950s and 60s as an ideal way of knitting academic theory with practice, may be at the verge of collapse. Employers in both the public and private sectors who once willingly accepted trainees are now facing serious financial problems and many have already been wiped out in the economic recession.

Students on industrial placements are being made redundant along with the workforces; many are finding it impossible to find placements at all and some, like on engineering and management courses, from polytechnics, are going to department store chains, are settling for any work experience they can get purely to fulfill the requirements of their sandwich courses.

Students at North East London Polytechnic for example, are already having to take unpaid work in laboratories to gain the necessary practical experience.

Unpublished figures from research carried out by the Manpower Services Commission show that during 1979-80 there were 53,722 students on sandwich courses and 23,838 of them secured placements.

Mr Alan Daniels, chairman of the Association of Sandwich Education and Training (ASET) and Director of the Institute of Industrial Training at Bradford University, was scared about the chances of finding all placements and he estimates that there are up to 20 per cent less placements available this year compared with last year, due to spending cuts, the closure of companies and firms and their training budgets.

He calculates that about 10 per cent of sandwich courses students are displaced or unsatisfactorily placed.

At Newcastle Polytechnic, it is feared that their situation may be worse with an estimated 100 students chasing every 40 placements.

Subjects most severely hit include the social sciences, public administration, business studies, economics, psychology, biology and physics, which heavily rely on placements in public sector offices and laboratories.

Polytechnics and universities are already taking drastic measures, either by closing some courses or removing the practical experience or sandwich element and reverting to a three-year instead of four-year degree course. A one-year in-service diploma for remedial teachers which ran for 12 years at Newcastle Polytechnic was one of the first to be closed. Reductions in local authority grants have meant that teachers can no longer afford to take part. Another course for professional company secretaries folded this year largely due to a decrease in the number of awards available.

At Bradford University, students on the public and social policy BA course are now being given the option of not going on the sandwich year and redesigning the duration of the course to three years.

Further evidence of the move away from sandwich education has been compiled by ASET. Its national survey of heads of polytechnic civil engineering departments was prompted by the change over from Higher National Diploma (HND) to the Higher Diploma of the Technicians and Education Council, and indicated that only four were to retain the sandwich form of education, and that about 100 were considering simulated industrial training unlike the HND which involved a sandwich placement.

Evan Brunel University which is proud of its record of finding placements for 1,800 students a year, is having to consider relaxing its placement requirement for overseas students because they are finding it almost impossible to get them accepted for practical training.

The students have now responded to the challenge by holding a weekend conference at Bradford University which set up a committee to link with ASET and draw up a charter for sandwich students. The National Union of Students was also successful in getting a motion on the dilemma of sandwich course students listed as a priority at their December conference.

Mr Alan Daniels, who attended the Bradford conference, welcomed the students' initiative. ASET already has 500 employers among its members, nine universities, 30 polytechnics and representatives from the Industrial Training Boards. With strong student representation they could wage a forceful campaign for more Government aid. Mr Daniels has a great sense of urgency believing that action is essential within the next three months and says: "If courses are cut back, they will never start up again."

He is angry at the Government's failure to back its verbal support for the sandwich system with financial assistance beyond the £2,500,000 a year first granted by the Labour administration in 1976. This is filtered through the Manpower Services Commission and directed towards engineering students but does not help the hard pressed social and biological scientists.

He looks enviously at the £250m granted by the Government to help the young unemployed and says that just £8m of this would virtually solve the student placement problem. Ironically the Government's efforts to help the young unemployed are seen as exacerbating another section of the community. Employers are now expected to be even more reluctant to pay the £65 a week average wage earned by a Brunel student on placement, when the MSC will pay the employers £60 a week to take on school leavers.

Mr Daniels says: "That £250m is going to hit us. It will certainly be taking place away from us."

A further exaggeration he envisaged if the recommendations of the Finniston Report are implemented and every industrial engineering student is required to have practical industrial experience.

Overseas students are already taking the brunt of the present difficulties as employers are reluctant to take them on trainees what they know they are unlikely to return to take full-time posts with them when they graduate.

Mr Alan Fulwood, head of civil engineering at Sheffield Polytechnic, feels strongly: "I would wish to have a let more overseas students but we cannot place them in industrial training with a selection process which is frankly racially prejudiced."

Overseas students also have to pay full cost fees even during placements and NUS executive member Mark Woodling told the conference that the union had written to the University Grants Committee in protest. It claimed that the committee's advice to universities to waive the full cost fees for self-financing students while on placement but not extending it to overseas students could contravene the Race Relations Act.

Although finance is vital in solving the placement problem, ASET recognizes that the educational establishments can help themselves to a certain extent by re-arranging term time. At the moment most students come available at once. The MSC funded research shows that demand for placements from BSc engineering students leaps from 1,500 at the end of March to almost 3,000 by April and peaks at 3,500 in July and August with a slump in January. It has been estimated that the number of placements could almost be doubled if as many students were offered for the October-March period, as for April to September.

Similarly there is criticism of the way some institutions encourage students to find their own placements and deluge firms with scores of letters in the process. When individual students have been fortunate enough to be offered two placements, they have been known not to inform the rejected employer and leave him without a trainee. It is suggested that a common selection procedure be drawn up by polytechnics and universities for the benefit of both students and employers.

Along with these points, the newly formed students' committee is likely to consider making it compulsory for major firms to take a quota of students for training each year. But foremost in their minds will be how to secure improved standards of training and student welfare at such a difficult time. The possibility of training standards declining and students being used for cheap labour strikes them as being highly probable when most students are going to be grateful for any kind of placement they can lay their hands on.

They are likely to press for a minimum wage and full consultation with students over choice of placement with the option to turn them down on moral or practical grounds.

If the placement problem is not resolved, some academics fear that sandwich education will fade away. Employers may then have to face paying graduates about £5,000 a year for two years to familiarize them with the practical skills they could have gained in a year had the sandwich system been retained.

Sue Emmett

Patricia Santinelli outlines the double aspiration of the Manpower Services Commission

A participant (or two) in a work experience project at Broxbourne

A sudden spurt of growth that eases the pain of youth

Last week two very different views on the direction of the Manpower Services Commission programmes for young people should take, were being presented at a major conference on education and training.

Mrs Shirley Williams, the former secretary of state for education and science, pointed out that the Government relied on the MSC for an immediate response to short-term emergencies caused by rising unemployment, and this was right.

But Sir Norman Lindop, director of Hatfield Polytechnic, believed that this onus should be lifted from the commission, so that it could be allowed to develop a long-term national strategy for education and training based on future demands.

In fact the MSC is clearly managing to do both. Its request for a major expansion in both the size and funding of the Youth Opportunities Programme to deal with rising youth unemployment has just been confirmed by Mr Jim Prior, secretary of state for employment. This is not only a response to a short-term emergency but very definitely an attempt at making YOP a long-term vocational education programme in which quality input is paramount.

Moreover the Commission's confidential consultative document, first announced in *The THES* two weeks ago, proposes a major revolutionary 10-year programme which by 1990 would effectively offer educational and training opportunities to all young people and adults, and is undoubtedly partially what Sir Norman had in mind. The Government is due to announce the new initiative in the New Year as the MSC is anxious to launch something in the spring or summer at the latest.

YOP has been virtually doubled in size. The programme will now offer 440,000 places for 1981-82 at a cost of £271m. This represents an increase of 180,000 places on targeted levels most of which will be in Work Experience on Employers' Premises (WEEP), at an extra cost of £84m. The programme will now offer opportunities not only to schoolleavers but to all unemployed 16 to 17 year olds and aim towards the provision of good quality vocational preparation for all out of work youngsters up to their 18th birthday.

The commission has also been asked to offer suitable opportunities to all unemployed leavers by Christmas 1981 rather than the following Easter and within three months to other 16 to 17 year olds who have been registered unemployed for that period. To support this 200 new posts are to be created in the careers service by April 1981.

Nevertheless although the expansion of the programme has been welcomed generally as a step in the right direction, some sectors have already been critical that no target date for achieving the longer term aim of developing a proper scheme of vocational preparation has been set or any commitment to providing resources for its implementation made.

Moreover others suspect that youth unemployment is rising so fast, predicted figures are for 600,000 unemployed in 1981-82, the commission will be forced to seek increased funding from the Government earlier than it expects.

But Mr John Cassels, director of the MSC, is quietly confident this will not be necessary if their financial and economic forecasts are correct. He says they usually are.

"I think what is particularly important is the emphasis Mr Prior has placed on serious vocational preparation programme for all young people and on quality. This is vital, even though the major increase has been in WEEP which is what young people want when they join YOP. We have made sure that sponsors have a learning code and we have pushed for increased further education and training in that area, so quality is being maintained and even increased", Mr Cassels said.

In fact the MSC's Special Programmes Division has been waiting for confirmation of YOP's expansion to undertake detailed work on a proposed framework to improve the quality of the programme. This was put to the SP Board for approval last month.

This framework is based upon providing "serious vocational preparation" through a set of four interrelated objectives, all designed to improve the quality of sponsors, the schemes and young people's individual experience.

The document warns these must be vigorously pursued if YOP's credibility is not to evaporate. "Moreover in preparing operational plans it must be recognized that the constant imperative of scale and number will remain and that much of the ground to be covered is new and there are many pitfalls for the unwary and over hasty", it states.

To achieve these objectives the commission says YOP must offer a valuable opportunity to secure a foundation of skills and knowledge relevant to the world of the 1980s. It also emphasizes the great importance of developing the further education component of the programme beyond the 12 weeks currently underlying pilot projects.

"Ultimately however, the best way of enriching the experience of YOP is to settle each youngster in a permanent job or full-time further education and training. This might be increasingly difficult in 1981", the Commission points out.

It is, however, determined to try and achieve this. Six models have been drawn up for consideration. All are designed to improve vocational preparation and quality and hopefully lead to full time employment or further education. For the first time they are aimed at the more able and higher ability youngsters, those with CSE, and O and A levels now beginning to enter YOP much to the concern of both the Commission and the Government.

Four of the models outline programmes which would last at least a year with a maximum of 52 to 95 days off the job further education and training. Most of the models will require increased cooperation from the education sector, but two have a specific hearing on further and particularly higher education.

One would be an apprentice WEEP scheme offering placements in professional, commercial, administrative, scientific and educational areas linked to educational day release. The latter element which the MSC does not intend funding would necessitate negotiations with the University Grants Committee and l.e.a.s. The other would be offered to training workshops providing products in electronics and engineering and also be linked to educational day release.

However, it is quite likely that during the 1980s both YOP and indeed the Universal Vocational Preparation Programme which Mr Cassels describes as converging and aimed at the same young people will be absorbed into the MSC new training initiative.

Mr Cassels points out that the initiative which is no longer then a new training philosophy is a long term step, but one absolutely necessary due to the advance of technology, the changes in employment it heralds and the need to stay competitive.

The document warns, for example, that by 1985 there are likely to be more white collar than manual workers, the latter group having fallen by one million from 1978 levels. "The lessons are clear, economic recovery will be held up unless people train in the skills in high demand" the draft says.

"But what we are talking about is not coercing people but winning them over to this strategy. We have to convince them and get them to understand what it is about and convince them this can be done", Mr Cassels says.

He added that Sir Richard O'Brien, chairman of the Commission, had told the National Economic Development Council only this week that resources were not the problem, obtaining commitment was the primary factor, resources would follow.

Indeed the document makes it quite clear that the realization of the three national objectives the commission is aiming for can only be brought about with the agreement of all sectors, further and higher education, l.e.a.s and employers and trade unions. It does not seek legislation although this is not ruled out and may be needed in establishing foundation trainee ships status.

If the new initiative succeeds we might by the 1990s have a training and education system envied by most European countries. Currently most of these have and continue to give much greater priority to this area with obvious benefits.

Clegg post mortem usurped by six per cent

David Jobbins and Ngaio Crequer anticipate the burning issues at the council of the Association of University Teachers

Pay questions past and present will dominate such of next week's Association of University Teachers national council.

But an expected post mortem on the way the union exercised itself from the Clegg fiasco is now certain to take second place to the prospects for the next two years following the disclosure that six per cent is all the University Grants Committee will finance.

A severe reaction is only to be expected, and this will surface during council's discussions. It can only add to the dissatisfaction already expressed with the level of the 13 per cent proposed increase which emerged from the first stage of negotiations.

There is substantial resentment at the events connected with the failure of Clegg and the impasse when negotiators sought a cost-of-living rise and came away with an improved 13 per cent which the Government now seems intent on whittling down.

But with an intriguing lack of subtlety, that anger appears—from the motions submitted for debate and now being composited—to be directed towards the union's own negotiators. It would be surprising if council were to support the back-biting. As general secretary Mr Laurie Sapper co often says, AUT lacks the industrial muscle of the power engineers, the train drivers or the waterworkers.

If AUT took industrial action, who would notice the effects apart from a few thousand students whose exam papers might not be marked, or who would have to wait for their degree certificates?

This industrial impotence is reflected in part in the demands for a change in settlement date from October to April, when an alliance could be formed with the notionally stronger public sector teaching unions.

Even the 13 per cent would result in "immediate erosion" of "pseudo-Clegg" settlement, according to the Glasgow association. As this would hit lower paid lecturers most severely, end Glasgow wants to instruct its negotiators to tilt the balance even more in that the increase at the bottom of the salary scale at least equals the rate of inflation in the year up to October this year.

It is unlikely that council will accept the stringent criticism of its negotiators which has been expressed in at least two motions. But that criticism will undoubtedly be expressed during debates.

Emergency councils should have been called to determine support for a number of decisions taken by negotiators according to the Open University Association. Total repudiation of the 13 per cent provisional settlement is demanded, and negotiators would be forced back to the table to renegotiate a rise in line with the increase in the cost of living in the year to October 1980.

Council is unlikely to support a vote of no confidence in the AUT's negotiators, but there is bound to be some criticism of the charge that the October 1980 claim should have been more widely discussed.

The experience of the past 18 months is likely to generate repeated attacks on the cumbersome two-stage negotiating machinery with which university lecturers are saddled. A reinforcement of AUT's existing aim of a single stage process is certain.

Anyway Council's lecturers have directed their fury against vice-chancellors rather than Government or other agencies. This antagonism seemed particularly misplaced was the vice-chancellors, for than the AUT, who were making a strong protest policy on overseas students end against spending cuts.

But the lecturers might be this time around. Vice-chancellors are looking seriously and obviously at the legal position and cations of tenure and there is real threat to job security if cuts are demanded of the universities in the near future.

Many vice-chancellors welcomed the recent speech by Edward Parkes, chairman of University Grants Committee which he warned of greater intervention in the affairs of universities and offered them a pruning knife to sever limbs.

More and more they have noted the oft-repeated caution unless universities reform themselves it will be done for them though real evidence of central government or Parliamentary pressure has never actually emerged.

The first question put to Parkes after he had made speech was what did dirty ventian actually mean in practice. Snme answers to that question come from the UGC sub-committee who have been requested to give advice on both strategy and tactics.

No doubt the question of strategy and tactics to be adopted by the AUT in the face of such stringent rationalization will be exercised at Council.

They have shown themselves to have some discipline and not lack power and effect when they fought a campaign over their superannuation. But that was an isolated anomaly. But that was an issue where it could be shown that all members were affected, and fighting for a rise for all is in some respects a easier thing to do than to pit the departments or the jobs of a minority.

One motion specifically on sexism comes from the hardliners of Strathclyde. It urges all local associations to seek ossurances from their Councils or Court that they will not initiate action on redundancy. It asks university authorities do take all steps, the motion urges non-compliance, firm and "if possible, more militant forms of action."

It is unlikely that Council will accoat such a motion, certainly not at the moment, but will seek a reinforced existing policy, vigorously to resist any attempt to impose redundancy, without spelling out exactly how.

Meanwhile the legal complications and the cost of imposing redundancy is overwhelming on the employers side.

A motion from Hull calls upon the officers to draw up contingency plans in the event of a university pursuing a policy of rationalization that is applied now born of interests, and generally pursued in far more specific plan of action for the ruining of Southampton university annual survey of the effect of cuts in the universities.

There is surprisingly little direct reference to the Atkinson report on the proposed contraction in Language Studies, once thought to be the area ripe for pruning cuts. But the statistics coming regarding Russian and various greatly among the institutions, end much will depend on what emerges from the UGC deliberations with subjects itself affected universalities.

Much time will be spent discussing the problems of research workers, a subject which has attracted a large number of motions.

It is generally noted that there has been made in improving the progress a lot of research workers in the last two years and a number of specific objectives are outlined.

Leede calls for a policy of no employment on fixed-term contracts after six years, when there should be unlimited tenure, and proposes two and three-year contracts for individuals, and especial university funds to retain researchers of more than four years experience.

It is incumbent on the AUT to show that their concern for the future of higher education is not confined to fears for their own survival. They will need to show future to be far more effective than spelling out the effect of Government policy on the universities, highlighting the demands for funding up for those aged and sixth-formers who are not places because the money is no longer there.

So far no-one is effectively doing that job. The AUT can be a positive pressure group, yet it is itself, both nationally and locally, the mantle is there to be grasped.

New Hall, Cambridge has just celebrated its silver jubilee. Rosemary Murray considers its past

Jills of all trades on top of the hill

New Hall began life in a former guest house, the Hermitage (left). Now it has its own modern college buildings.

October, 1954, 16 undergraduates and a tutor end lecturer in a house in Silver Street, Cambridge, thus began a New Hall which in 1972 became the twenty-third college of the university. The Times Educational Supplement reported the event with these words: "The prophetic eye can already see young lady undergraduates looming in the distance of university", wrote Lesley Stephen of Cambridge in 1865 (betraying in his choice of language the awkwardness does felt in the presence of young ladies in those days). In fact no special clairvoyance was required. Within four years Girton's forerunner was opened, and Henry Sedgwick was sowing the seeds of Newnham. Since the university long held the monasteries of these societies at arm's length, and in the final embrace of 1921 it was not to degrees but to "titles of degrees" that they were admitted. . ."

In 1948 the university had at long last approved the admission of women to the university, but the proportion of women to men was easily the lowest of any university in *Great Britain*. Girton and Newnham, which were the only women's colleges, did not wish to increase their numbers so the only way to admit far more women was to found a new college.

In 1952 was formed an "Association to Promote a Third Foundation for Women" in the University of Cambridge. Although there was considerable support, among men as well as women, for an increase in the number of women at Cambridge there was also active opposition. The argument was still current that since the majority of women would get married, there was no point in them having a university education; thus continued Lyndon Charlotte M. Yonge had argued nearly 100 years before to Emily Davies, the founder of Girton College, that "all girls if brought up in large numbers always see another in manner and if is nothing else . . ".

Famour women outlier (now Dame) when asked to support the new college, replied that she saw no reason why a woman to have a career; she had not. Some doubt expressed by members of the university as to whether there would be a sufficient supply of girls of adequate intellectual standard to fill a new college. Forecasts about the number and calibre of girls likely to enter were difficult to make, any answer to this question being largely on subjective judgment. The university was finally persuaded that a modest increase in the number of women undergraduates could be allowed and in June the council of the senate issued a letter to the university recommending approval for a new "residential institution for women".

The gloomy forecasts of suitable candidates for a new college proved groundless. Women have never lacked qualities of high intellectual calibre.

New Hall began in a former guest house called the Hermitage. The house was leased ready equipped with essential bike sheds and furniture suitable for undergraduate rooms. This was an important consideration since its legacy was virtually no funds, merely £20,000 collected privately. Rent was to be paid to the Hermitage. The 15 undergraduates were a marvellous variety of people. In the early years both the tutor and lecturer were "Jills of all trades" and between them covered many functions, head and deputy head of the college, tutor, teacher, director of studies, praelector, bursar, librarian, door keeper (the front door was locked at 10.00 pm), gardener, carpenter, electrician and plumber.

Meals were in an amazing Victorian dining room with a dado, dark green embossed wall paper and a marble fireplace. There was no fire since the legs of chairs had often to be placed actually within the fireplace. The size of the dining room determined the size of New Hall in early years, the maximum of 47 bodies that the room was calculated to hold led to three undergraduate years of 15 each and two members of the high table. Despite the absurdly small numbers there was actually a high, or rather a separate, table for senior members. Before New Hall left this house for new buildings, the same room was on some occasions, such as the Christmas dinner, holding up to 70.

Rosemary Murray: first woman vice-chancellor.

Life at New Hall in the Silver Street days was tinged with a consciousness of being different but the same. New Hall was determined to become a full college of the university, which meant that there was a pre-existent shape and recognized standards to achieve. But it was the first college to be founded in Cambridge since 1882 and the first college for women to be founded there since 1871.

Since the admission of undergraduates to Oxford and Cambridge has by long tradition been the responsibility of the colleges and not of the university, New Hall gave careful consideration to the question of the selection and admission of its undergraduates. There were considerable variations in procedures, followed by different colleges, but the admission of women to Girton and Newnham was through a joint scholarship and entrance examination taken by all candidates at their schools and held by the two college working in close collaboration with each other. It was also usual for school girls to remain for three years in the sixth form and to apply for admission in the third year after having taken the A-level examinations. This meant that candidates for admission to Cambridge (and Oxford) regularly received teaching in school or at a coaching establishment for the examination. New Hall decided to introduce a new method of selection not based on written subject examinations. The subject papers were replaced by one written paper with a wide range of questions covering many fields of interest. It was designed to give equal opportunity to candidates with a wide variety of educational backgrounds and to test originality, power of expression and capacity to reason. Examples of the shorter questions which have been set are:

Is equality of opportunity either possible or desirable?

The world of science is the world revealed by the senses.

Describe and comment on the remarkable properties of water.

How have ideologies influenced the course of history?

What's in an egg?

Although the exact form of the paper has varied over the years, basically it has remained the same and no special preparation for it is either required or desired. Candidates who wish to read classics or modern languages have to take language papers instead of the New Hall paper.

The general paper is only part of the total selection process; on the results of the paper and school record, including A level results if already taken, and the head's reference, candidates are selected to come to Cambridge for interviews. Each candidate has three interviews; two are of a general nature while one is in the nature of a *viva voce* where a candidate is encouraged to talk on the subject she wishes to read at the university with the don who will be teaching her, or other expert in the subject.

Candidates will vary widely in the nature and quantity of the factual material at their disposal owing to differences in the teaching they have received, to differences in A level syllabi and to whether they are pre- or post-A level, and so on. Some may even have had specialized teaching for admission to Cambridge. The *viva* gives an opportunity to the examiner of choosing topics for discussion which are suitable for the background and experience of the candidate.

New Hall has been very satisfied with the unique method of selection; members of the university with experience of teaching undergraduates from many colleges have often remarked on the vitality and interest shown by undergraduates from New Hall.

Over the last five years places have also been offered to candidates who have not written the examination paper; for a pre A level candidate such a place will be conditional on A level grades achieved subsequently, for post A level candidates places are often offered on interview only. New Hall of course also considers the applications of women candidates who have not been admitted by the colleges of their first choice but have taken the Cambridge colleges examination.

A further difference between New Hall and other colleges is that entrance awards have never been offered, although scholarships carrying a small monetary value have been awarded to undergraduates in residence to mark distinction in university examinations. The custom of awarding scholarships at Oxford and Cambridge has long outlived its original purpose of financing poor scholars at the university. No longer are university grants only given to those who obtain a college scholarship since all homeless university students are, now eligible for a mandatory grant. It has always been felt at New Hall that scholarships are more often awarded to candidates who attend schools which can provide specialized teaching, and therefore the awarding of entrance scholarships is not in line with the aim to give equal opportunity to candidates from all schools. New Hall had hoped that in time other colleges of Oxford and Cambridge might also consider stopping entrance awards, but although there have been occasional indications by individual colleges of dissatisfaction with the system, no change has taken place.

Since the colleges of the university are autonomous foundations, starting a new college would be an expensive business, and indeed the council of the senate made this quite clear in its report:

"The council have it in mind that if a new foundation were established . . . it would need to be founded and maintained without financial assistance from the university, and it is possible that in the course of time it might apply for recognition as an approved foundation and ultimately attain the status of a college of the university; but any such development would depend on the fortunes of the new institution and on the extent to which it was fulfilling the purpose for which it had been established."

In early years New Hall was therefore much concerned with raising money for building and endowment through public appeals. This was a hard task for response was slow; the creation of opportunities for woman to go to Cambridge was not a cause which gained any support from industry or commerce. There was no single benefactor such as Lady Margaret Beaufort, foundress of both Christ's and St John's Colleges. However, as a result of many comparatively small donations and two major donations from the Wolfson Foundation and the Elizabeth Nuffield Foundation, it was possible 10 years after the start of New Hall to move into new college buildings.

By the time that New Hall celebrated its Silver Jubilee, the capital endowment had increased through generous donations from St John's College, from other better endowed colleges and through the college contribution system. The teaching and welfare of its undergraduates must be the first call on the resources of any college but, although it is still one of the poorer colleges, New Hall is already making a contribution to the support of research and teaching.

The architects of New Hall, Chamberlin, Powell and Bon, were given a brief for a college of 300 undergraduates. The buildings on the Huntingdon Road now occupied by the college comprise nearly all the planned collegiate buildings, together with residential accommodation in the main building and in various hostels for about four fifths of the undergraduates.

The buildings of New Hall have prompted various responses: on the occasion of the opening of the partially completed buildings by the Queen Mother, Diane Rowntree in the *Guardian* wrote: "Like an exotic cygnet that turns out to be a homely duck, the Serenade extravagancies of New Hall have finally composed themselves into a most respectable college." The more professional comment of Professor Pevsner was: "The hall, the library, the sunk court between them have been built. They are an emphatically formal composition with shades of Agra in the pool and the domed hall and shades of Byzantium in the hall itself. . ." An undergraduate's comment was: "New Hall's architectural glories extend to the undeniably ingenious split level design of some shared study bedrooms which give double space and plenty of privacy. . . . Other places of interest are the subterranean party room, the art studio, sewing room and music rooms. The hub of all this activity is the Porters' Lodge which is decorated with a large notice saying 'communicate', the porters will help anyone and know everything."

Now Hall was founded to provide more places for women at Cambridge. In 1952 *The Guardian*, in an editorial, had asked whether through this new movement, so largely inspired by women, Cambridge could evolve a college of a new type, both in constitution and in spirit. Although a college of the university must in structure and constitution adhere to a general pattern, defined in its statutes, yet even here there are variations between colleges, and New Hall is no exception. It was the first college formally to include two undergraduates on its college council, the executive body having responsibility for the administration of the college under the governing body (consisting of president and fellows). Undergraduates (and graduates) serve on all college committees, and both formally and informally there are close links between students and fellows.

New Hall does not regard a college for women in Cambridge as anomalous even when a number of men's colleges have become mixed through admitting women. The increased provision for women is to be welcomed but there still remains a need (and demand) for single sex colleges, so providing for a boy or girl a choice of institution. All facilities in the university are open to all members of colleges, whether men or women, but for many the opportunity of living without the opposite sex in the close knit community of a college is welcomed. The fact that New Hall is a women's college does not mean that its members are socially inhibited, rather the reverse. It does provide however the opportunity for occasional peace and quiet without the continual and often overwhelming presence of young men of the same age group.

New Hall, in celebrating its Silver Jubilee, can be said to have arrived. From the beginning it has felt special and not to be merely imitative either of the men's colleges or of Girton or Newnham. It has evolved its own spirit and tradition, though this is difficult to describe. Each generation of undergraduates would probably refer to a generally friendly atmosphere, to a sense of community and to the feeling that New Hall plays a vital role in promoting women's interests in the university so that its members enjoy the best of the academic and social life of Cambridge. Past students express gratitude for three years at Cambridge (happy years for the majority) when New Hall gave them opportunities for growth and development.

The objects of the original association of New Hall, quoted in the Royal Charter granted to the college, were threefold; to found and carry on a collegiate institution for the higher education of women in the university, to promote its development into a College of the university, and to advance education, learning and research in the university. The first two objects have been achieved, the third is the continuing purpose of the college.

Dame Rosemary Murray is president of New Hall, Cambridge.

A latterday prophet's vision of God

Maurice Cowling discusses the thought of A. N. Whitehead, mathematician and philosopher, in an extract from his new book

By the time Alfred North Whitehead become a prophet in the middle 1920s he had spent at least a decade reconstructing the view which mathematical physics took of the world with which it dealt. In *An Enquiry Concerning the Principles of Natural Knowledge*, in *The Concept of Nature* and in *The Principle of Relativity*, he had drawn out the implications of relativity and quantum mechanics for existing conceptions of time and space. This was a technical discussion, and explicitly not metaphysical. Though philosophical discussion could not be avoided, it was intended very strictly to be philosophy of science, the determination of the "most general conceptions which apply to things observed by the senses". It was not until *Science and the Modern World* that Whitehead undertook an argument that was explicitly metaphysical.

When he did so, he did so in two different directions. On the one hand, he claimed that mechanistic materialism needed to be directed by intuitions from religion and culture if an adequate metaphysic was to be unfolded. On the other, he made religion and culture the object both of descriptive and of legislative philosophy. This combination of discussions, attributed by American demand after his appointment to the Harvard chair, made Whitehead an important figure in English thought from about the middle of the 1920s until some time in the early 1950s.

In some respects *Science and the Modern World* looked like a justification of spirituality—an alignment on the side of religion against the materialism by which it had been assaulted. It argued that religion had intuitions which were compatible with relativity and quantum mechanics, and that literature, art, religion and philosophy had a part to play not only in constructing a cosmology and metaphysics but also, through scientists' cosmological and metaphysical assumptions, in the development of science itself.

In this respect the most important chapter in *Science and the Modern World* was *The Romantic Reaction*. It was here that Whitehead made his first major cultural statement, fixed himself from the philosophy of science, and moved decisively towards what he called "concrete educated thought"—the "concrete outlook of humanity".

This meant in the first place "literature". It was through literature, and especially through "its more concrete forms—poetry and drama", that the "inmost thoughts of a generation" were said to be expressed. It was to elucidation of the inmost thoughts of the modern world that *Science and the Modern World* was dedicated.

In the early chapters "modern" meant the historical revolution of the sixteenth century and the scientific revolution of the seventeenth, of which the historical revolution had been the progenitor. It also meant the principles that the seventeenth century had established—the "accumulated capital of ideas" on which Europe had been living ever since.

In chapter III Whitehead listed these ideas, arguing that *The Century of Genius* was not only the one century that had risen to the greatness of its occasion but also that it had established its ideas so impregnably that "scientific realism based on mechanism" had survived Berkeley's and Hume's criticisms and the "unnerving belief" manifested in the individualistic enterprise of the European peoples that men were "self-determining". This radical inconsistency, was said to have "enfeebled thought" and to have produced "much" that was "half-hearted and wavering in our civilization". It was to the eradication of fetishes that the remainder of Whitehead's writing was directed.

In undertaking eradication, Whitehead criticised modern science for being "blandly indifferent" to philosophy. On the other hand he claimed that any philosophy worth the name must take account of "noetheric intuition". Though it was science that had broken up the stable foundations of physics and made mincemeat of "mechanical" explanation, it was in Tennyson, Newman, Wordsworth, Shelley, Matthew Arnold and the doctrines that the poets had been promulgating since the seventeenth century that were imputed the discovery that the philosophy of nature among concern itself "with "change, value, eternal objects, endurance, organism and interfusion." If it was to provide the requisite reinterpretation of the "riddle of the universe".

Science and the Modern World was an attempt to persuade the narrow rigidity of mechanistic materialism to emulate the broader "rationalism" of the Middle Ages. In *The Making of Religion* a similar attempt was made to break down "narrow dogmatisms" in religion.

When *Science and the Modern World* was delivered as a course of lectures at Harvard in 1925, it was shorter than the book of the same title which was published a year later. Though there was a lot about Christianity, the lectures not only did not include chapters II, X, XI, and XII of the book, they also contained virtually no discussion of God. In Chapter XI (God) and chapter XII (*Religion and Science*) as in *Religion in the Making*—all of which were written at about the time at which Eliot was becoming an Anglican—God was in the foreground, in understanding his God, it is necessary to understand first what Whitehead thought about religion.

About the importance of religion, Whitehead was never in doubt. A religion might be a good or evil one; it might even be "very evil". But even an evil religion was important, and religion itself was said to be "of transcendent importance". This did not mean that all religions were equally important or that there was not an order of importance. In fact there was such an order. It had emerged progressively through the course of time, beginning with ritual and emotion and reaching its culmination in belief and rationalization.

The phase of ritual and emotion enrolled on habitual performance of definite actions" which had "no direct relevance to the preservation of the physical organism of the actors", but rendered the "joy of exercise" associated with actions that had aided the preservation in the first place. Ritual was the repetition of those actions "for the sake of the attendant emotions". It was from the excitement of emotion for its own sake that mankind was said to have "started upon its adventures of curiosity and feeling". It was also, however, at this stage—where ritual was stabilized and beliefs uncriticized, and where religion was communal, social, and a matter of tribal custom—that the "mass of semi-civilized humanity" had got stuck.

The first thing that Whitehead emphasized was that communal religion (the religion of ritual and emotion), though it had "served humanity well" by creating a sense of social unity and responsibility", had in the end ceased to be an "engine of progress" because the relations it had produced, being "religions of the average," had been at war with the ideal". Whitehead not only did not advocate the sort of religion, he advocated a religion of belief and rationalization in preference to it. This was said to have emerged "among all the civilized races of Asia and Europe". In the last 6,000 years, and after an intensive struggle in the thousand years before Christ, to have established a "new synthesis which, in the forms of the great religions, had lasted to the present day".

Apart from remarks in praise of Roman and in dismissal of Judaic religion, Whitehead was concerned primarily with "Buddhism and Christianity—Buddhism as a "metaphysic generating a religion", Christianity as a "religion seeking a metaphysic", both bearing in their separate ways the marks of what he called a "rationalistic religion".

What a rationalistic religion did—what they had all done since they were established—was to "transform character". A rationalistic religion was not a matter of "collective enthusiasms; revivals, institutions, churches, Bibles" and so on. It was "what the individual did with his own solitariness", and this was not only moral but also metaphysical, so far as metaphysics, when "sincerely held and apprehended", had the effect of "cleansing man's inward parts" by developing individual prayer, insight and intuition and the cultivation of the internal life.

At first sight this seems simple and obvious. But it was far from being either. In the first place, because rationalistic religion recognized the value of the "diverse individuals of the world for each other" and of the "objective world" which was "derivative from the interclothing of its component individuals". Secondly, because, absolute solitariness being an impossibility, man wanted to spread the good news and needed therefore not only to promulgate dogma but also to promulgate a dogma that they believed to be true.

Whitehead's interest in religion was complicated. He wanted to connect it with those "permanent elements" through which there was a "noble order in the world". But he did not full for the "simplicity of religious truth" which had been "the favourite axiom of liberalising theologians". He argued that dogma could "never be final" and had to be "relative to the sphere of thought from which it had arisen". It would require a Hellenistic degree of complexity, he argued, if it was to be made consonant with the knowledge that had been acquired in the modern world. In *Religion in the Making*, in the chapter on God in *Science and the Modern World* and in *Process and Reality* he showed how complicated dogma would have to be made if it was to regain the importance it had lost.

In *Religion in the Making* Whitehead drew a parallel between the dogmas of science and the dogmas of religion. Where the former aimed to formulate "in precise terms" the truths disclosed in the "sense perception of mankind", the dogmas of religion aimed to formulate "in precise terms the truths disclosed in the religious experience of mankind". Religious dogmas were not to be understood as being in any simple sense "God's word". They varied with external conditions and human experience, and should be subjected to the same sort of treatment as scientific dogmas had received in the course of being made relevant to modern minds. The main aim of Whitehead's religious writing was to show how a religion which was expressed in modern terms could cohere as readily as post-Newtonian science with the organic philosophy that he had invented.

The philosophy of organism considered all aspects of being. Before the Gifford Lectures, laid it out in full, fortifying detail, it had been approached in God, in *Religion and Science*, in *Science and the Modern World* and in *Religion in the Making*. In aiming, as he did in these works, to drag theology into the full glare of philosophical publicity, Whitehead played a self-consciously Erasmian role, criticizing the narrowness of Anglo-Saxon Protestantism and, in particular, the "curious" Victorian "delusion" that "our beliefs" can be founded on an "historical investigation" (as though the past could be interpreted otherwise than in terms of the present, or metaphysical dogmas be extracted from an interpretation of the past except through "prior metaphysical interpretation of the present").

These works covered an immense amount of ground. They provided a prolegomenon to a "cosmologic theology, which a school of American theologians has taken for its slogan". What was significant in England when they were published was their emphasis on the intellectual importance of Christianity.

About the intellectual potentialities of Christianity, Whitehead was flattering. Though it had suffered from having an "clearcut separation from the crude fancies of the older pagan religions", it had one overwhelming advantage, that it was capable of enormous flexibility in development. It began with a "tremendous fact", the fact of Christ. But since this fact was not, according to Whitehead, a metaphysical doctrine, Christianity had been far more open to metaphysical and philosophical suggestion than Buddhism had been. It was, therefore, if properly developed, well able to meet the philosophical needs of the twentieth century. Whitehead did not leave the impression of supposing that the Christian churches left to themselves would develop Christian theology properly. But he aimed to show that they could do so if they would recognize that theology could no more be sheltered from metaphysics than metaphysics could be from religion.

In *Religion in the Making* the contribution of religion was laid out. It turned out to be much the same as that of literature in *Science and the Modern World*: the assertion that there is a "quality of life . . . beyond the mere fact of life" and that this has no direct connection with "obvious happiness or obvious pleasure". It was when these intuitions were combined with the constituents of relativity and quantum mechanics that Whitehead's philosophy began to be formed.

The works we are discussing dealt with the main questions that had arisen out of the philosophical history of the modern world. In one question—the question of God—they attributed fundamental importance.

What Whitehead's God was, was closely connected with what He was not. He was neither Aristotle's God nor Anselm's. He was not an imminent "impersonal order in which the world conformed". Nor was He the pantheistic moral reality of which the "actual world" was a manifestation. What He was not most of all was the "theologian's transcendent creator"—the Aristotelian Hebrew/Roman conjunction of "unmoved mover", "ruthless moralist" and "divine Caesar" which had brought both "idolatry" and "tragedy" to Islam and Christianity.

Islam's tragedy was not specified. Christianity's was that, in spite of its metaphysical genuineness, it had forgotten its "gallilean origin", and had reduced Christ's "vision of humility" by terror, bigotry and social conservatism. Its theism having been disposed of in Hume's *Dialogues Concerning Natural Religion*, Whitehead aimed to see what could be done with humility, love, providence and other conceptions of which its theology was alleged to have lost sight.

Whitehead's God was a God to whom worship was due. But the "intuition of a personal being substrate to the universe" was merely psychological, and, though mothers could ponder many things in their hearts which their lips could not express", it was obvious that psychological intuition had very little place in Whitehead's scale of knowledge. What Whitehead wanted was a metaphysical conception to supersede the conceptions that Christianity had created in the past—a conception which was available in the form of a living God in every man's heart which had made "the individual personal unity of the Semitic God" into a heresy. It was through the logos, and through the circumscribed intuitionism which could be deduced from Christ, Plato and St John (but not St Paul), that God came into His own metaphysically.

The metaphysical conception of God was needed as part of Whitehead's rationalistic religion. It was also needed as a resolution of problems in his philosophy. These were approached through religion's "direct apprehension" of the "completed ideal harmony" which informed the world.

This "ideal harmony" of God was the "principle of Concretion", the agency by which "every actual occasion" imposed its "limitation" on "possibility", and gave "togetherness" both to occasions and to "otherwise isolated external objects". God was necessary as an "possibility" and was to be preserved, if the modern world was to be distinguished, and it was to be gained through Christ. He was the "ultimate limitation" and His existence the "ultimate irrationality", and He also was "physical need for a given determination" which mere reason was unable to supply itself.

The Principle of Concretion showed God having a dual relationship with the world. His primordial nature was a conceptualization which was intimate, devoid of tension and "limited by actuality". His consequent nature was the "weaving" of his physical feelings upon his primordial conceptions"; the "gradual realisation of the actual world in the unity of nature". This nature was not static, as traditional theism had made it. It combined "actuality with permanence, with fluency as its complement", and performed an "efficacious function" in the "multiple unification of the universe" in which "actuality" had its "present moment" but did not die "in its passing" but "lived on in the immediate fluency".

In Whitehead's philosophy, God was the lear that "the past fades" and that "time is a perpetual perishing". The future was kept open by a process of selection which, in the imposition of Value upon the world, was or once "the source of all evil and the process of its redemption". Men had "the Kingdom of Heaven within them, but the Kingdom of Heaven was also God who is within them, the "overcoming of the world by good". "Every great religion" said to "have had its "dark side" was said to "have been saved by God into the world" which "pursued the "idol". God's Nature was indeed, "ever enlarging itself" and the "end" was "the final end of creation": "existence in the perfect unity of adjustment to each other, and in the perfect multiplicity of the attainment of individual value" for "existence" where "Value means was not disjoined from Value being an end" and the "transient pain of sorrow and pain was transformed into an element of triumph".

Whitehead was admirable because of his determination to show how unprejudiced sophistication was compatible with the professional scholarship. Few who had no scientific or scholarlikeness and fragility of assumptions upon which professional careers are built. No wonder he was a "prophet of those two complementary visions of the world: the rigidity about essentials which professional scholarship usually induces. Even if the doctrine of inventive adventure was a theory itself (excluding the adventure of conclusion that minds should be closed in some directions rather than in others), it was valuable to have from the world an unclouded application to philosophy of the dreaming conclusions that "all argument must rest upon premises more fundamental than the conclusions".

More than anyone else in the book, more even than Tyrrell, Whitehead embodied liberal scholarship: the learning, its hopes and its consciousness of the public demand of the intelligentsia. Where others (Collingwood, for example) were resentful and fearful about the future, or, like Eliot, Eliot, Joyce and Orthodoxy, Whitehead combined the performance of inherited Anglican or Episcopalian duties with the widest range of specialist knowledge and a deep optimism which seemed to have deepened after his arrival in America. No one was happier about the changes that occurred in England between 1918 and 1945. No one had greater confidence in the future of modern universities. No one was more relentless or rhetorically fluent in perpetuating Emerson uplift.

In the 1920s and 1930s Whitehead was sometimes praised by Christian apologists who were pleased to find a collaborator of Bertrand Russell and for use against him. Whitehead's reputation was enhanced with respect. As we have seen, Whitehead favoured religion, the religion he favoured was "spiritual" and in a Platonic mystical and sublimated sense, enmeshed in humanitarian sentiment. It may be that if I had not secured of Whitehead in Cambridge the world not have struck me as a difficulty. Certainly the difficulty struck me in Yale and Toynbee.

The author is a fellow of Peterhouse College, Cambridge. His book on Public Doctrine and Modern England was published yesterday by Cambridge University Press, price £20.

The silent armies which lay siege to liberty

In our continuing series on academic freedom, Ali Mazrui looks at some of repression's subtler allies in the states of East Africa

ecerbated tensions between town and gown from time to time.

Nairobi students have sometimes seen themselves as defenders of academic freedom, and sometimes as champions of civil liberties at the national level. Their anger when J. M. Kariuki, a major champion of civil liberties, was murdered—and the authorities seemingly tried to cover up—was a genuine case of moral outrage. At subsequent anniversaries of Kariuki's murder there have sometimes been new eruptions of student anger. Those in turn have influenced relations between town and gown.

A special aspect of this wider relationship is the tension between gown as against uniform, the recurrent confrontations between students and the forces of "law and order" in Kenya, Tanzania, and Uganda. In Kenya especially a kind of adversary relationship has evolved between the police and the students. There have been occasions when the police have gone out of hand and manhandled both students and staff on campus. On one particular police "invasion" of campus there were even allegations of rape.

In Uganda the worst case of "invasion" was the one of August 1976. David Martin of *The Observer* sensationalized the story with reports of an alleged massacre of 100 students and the prospect of further killings of up to 600 students. There were also gruesome details of girls having their breasts chopped off in a public display of utter savagery.

On the whole, *The Observer's* crusade against Idi Amin was justified, but this particular story damaged the reporter's credibility in many circles. No massacre had in fact taken place on campus at Makerere; no women had had their breasts chopped off. But there had been "milder" forms of bullying and brutality committed by an invading group of soldiers on to the campus with instructions to teach the students a lesson they would not forget. These soldiers did beat up students and kick them around, and some students were forcefully taken away for further bullying and intimidation. Arms were broken, knees bruised, and there were once again stories about girl students being raped by soldiers. The story was gruesome enough without the sensationalism of alleged massacres and sex-related mutilations.

The basic tension between gown and uniform in Uganda has persisted since the fall of Idi Amin. Some concern about the role of Tanzanian troops in the country has sometimes been expressed by both Makerere staff and students. The ethnic consciousness in Uganda, often degenerating into deep animosities and interethnic violence.

These factors affect academic freedom in a variety of ways. There is, for example, the perennial problem of ethnic arithmetic in many African societies. How many members of this ethnic community are professors, or how many students from a particular ethnic area have gained admission, or what is the "tribal" composition of university administration—all these are factors which greatly influence both emotional attitudes and actual decisions.

Ethnicity can also condition people's attitudes to academic freedom itself. A number of academics at the University of Nairobi were relatively indifferent to the fate of the Kenyan novelist Ngugi wa Thiong'o. These non-Kikuyu academics viewed Ngugi's arrest and detention not as a case of academic freedom denied, but as a case of the House of Mumbi divided. The Kikuyu were turning against each other, which some academics at Nairobi regarded as a potentially healthy development. Indeed, some of Ngugi's critics on campus regarded him as primarily a Kikuyu nationalist, obsessed with Mau Mau in his novels as a "Kikuyu movement". Ngugi was also emerging as a major defender of the interest of the Kikuyu language not only against the threat of the English language, but also against the challenge of Kiswahili as a national national language. Ngugi's play which was widely regarded as a major reason for his detention was in the Kikuyu language, and at one time he seemed to be bullying his publishers (Heinemann Educational Books) to publish the Kikuyu version (in spite of the very limited market) before he would consider either a Swahili or English translation. Some kind of deal has since been agreed upon between him and his publishers.

It was also alleged to me by some of Ngugi's critics at Nairobi that when he was head of the Department of Literature ethnic considerations influenced departmental policies in African oral literature. It was also alleged that ethnic considerations "subtly" influenced recruitment and promotion within the department.

That ethnic considerations are relevant in decision-making throughout East Africa is surely a matter of little doubt. But whether such considerations have been relevant in any particular department, either at Nairobi or elsewhere, is sometimes a thing which can only be ascertained on the basis of the kind of credible evidence. What is indisputable is that among the "educated" or even "blind social forces which endanger academic freedom and constitutional democracy in Africa is the potent force of ethnic loyalties, both conscious and subconscious.

Of a different order is the tension between town and gown, especially in Nairobi. The periodic strikes and demonstrations by students often generate a good deal of adverse publicity in the press, including furious letters to the editor complaining about the "spoiled brats". The fact that students sometimes go into the streets to the streets in Nairobi has understandably exacerbated tensions between town and gown from time to time.

Nairobi students have sometimes seen themselves as defenders of academic freedom, and sometimes as champions of civil liberties at the national level. Their anger when J. M. Kariuki, a major champion of civil liberties, was murdered—and the authorities seemingly tried to cover up—was a genuine case of moral outrage. At subsequent anniversaries of Kariuki's murder there have sometimes been new eruptions of student anger. Those in turn have influenced relations between town and gown.

A special aspect of this wider relationship is the tension between gown as against uniform, the recurrent confrontations between students and the forces of "law and order" in Kenya, Tanzania, and Uganda. In Kenya especially a kind of adversary relationship has evolved between the police and the students. There have been occasions when the police have gone out of hand and manhandled both students and staff on campus. On one particular police "invasion" of campus there were even allegations of rape.

In Uganda the worst case of "invasion" was the one of August 1976. David Martin of *The Observer* sensationalized the story with reports of an alleged massacre of 100 students and the prospect of further killings of up to 600 students. There were also gruesome details of girls having their breasts chopped off in a public display of utter savagery.

On the whole, *The Observer's* crusade against Idi Amin was justified, but this particular story damaged the reporter's credibility in many circles. No massacre had in fact taken place on campus at Makerere; no women had had their breasts chopped off. But there had been "milder" forms of bullying and brutality committed by an invading group of soldiers on to the campus with instructions to teach the students a lesson they would not forget. These soldiers did beat up students and kick them around, and some students were forcefully taken away for further bullying and intimidation. Arms were broken, knees bruised, and there were once again stories about girl students being raped by soldiers. The story was gruesome enough without the sensationalism of alleged massacres and sex-related mutilations.

The basic tension between gown and uniform in Uganda has persisted since the fall of Idi Amin. Some concern about the role of Tanzanian troops in the country has sometimes been expressed by both Makerere staff and students. The campus reaction is part of a wider national questioning.

On the other hand, Makerere still has enough prestige to make soldiers hesitate about bullying Makerere people when they are stopped at road blocks. A Makerere colleague was stopped by a Tanzanian troop at such a block. The questioning indicated that the troops wanted to take away not only his watch and whatever else he might have had that was valuable, but also the car he was driving. He told them he worked at Makerere, grabbed his suitcase and started to run. He was lucky the soldiers did not shoot him in the back but ran after him and caught him. They then inspected his briefcase, which was full of academic material. They decided to let him go, and returned his car to him. Tension between gown and uniform is sometimes transformed into deference from uniform towards gown.

The presence of Tanzanian troops in Uganda was in any case part of a wider picture concerning relations among the three countries of East Africa. Positive academic freedom—in the sense of effective pursuit of truth and enhancement of knowledge—has suffered because of the political fluctuations in the relationships of the three countries. Access to books published regionally has suffered particularly acutely. East Africa was a book market in its own right, as well as regional market for academic and intellectual journals published in one country and available in the other two. This circulation of books and journals within the region has declined drastically since 1970 when the University of East Africa broke up into three different universities, and when subsequently movement of goods among the three countries were subject to increasing regulation.

President Nyerere's decision to close the border between Kenya and Tanzania was the most dramatic of these trends. Publishers in each country began to retreach even further, resigning themselves to small national markets rather than regional ones. Nyerere's impatience with the politicians in Kenya has always been understandable. More difficult to understand has been Nyerere's overreaction and proud stubbornness. For someone who used to be regarded as the main champion of East Africa's integration, Julius Nyerere has done more to ruin the chances of a future East African federation than any other single individual in the region's history. Even the filtration with Ugandans following the fall of Idi Amin is now turning sour. For the first time there is real Tanzaphobia in parts of Uganda, in spite of Milton Obote's gratitude for Tanzania's hospitality while he was in exile, and among other Ugandans, partly because of Milton Obote's gratitude to Tanzania.

But whatever the causes of the political disintegration of East Africa, one result has been a dramatic shrinkage of movement of scholars in the three East African universities, as well as the shrinkage of journals and books among the three countries. If academic freedom is interpreted in the positive sense of freedom to do academic things (rather than merely in the negative sense of freedom from restraints imposed by authorities), then the quality of academic freedom in East Africa has significantly deteriorated since the old days of annual regional meetings of scholars and free circulation of publications and researchers.

Finally, among the blind social and economic forces affecting academic freedom, should be included the state of the world economy and its impact on movement of scholars and circulation of knowledge. For example, the price of petroleum since 1973 has had a major negative effect on import of books and journals from abroad. Such imports require foreign exchange, and the problem of foreign reserves has got increasingly acute since 1973. The Organization of Petroleum Exporting Countries (OPEC) has been a major lesson in international economics for the Third World, but OPEC has also inadvertently reduced Third World access to other branches of knowledge. Foreign exchange controls have become stricter than ever, reducing the mobility of Third World scholars except for those who are in considerable international demand. Foreign exchange controls have also reduced the capacity of Third World scholars to subscribe to major international journals in their fields, or to order books published outside their own countries. The libraries of the Third World are getting archaic in the wake of rising oil prices.

On the other hand, we have little sympathy for the major powers from the point of view of OPEC's oil prices. Those powers previously exploited oil producers, and today they are often responsible for a great deal of the growth of world inflation and recession. Independently of OPEC. It is also true that most of OPEC's customers in the Northern hemisphere are in any case halfway into market forces and the mechanism of supply and demand. If the market forces are sauce for the Western goose, there must surely also be sauce for the OPEC gander.

But while I have scant sympathy for the North, I do feel OPEC should follow the example of Venezuela and Mexico and establish a two-tier pricing system. Venezuela and Mexico have compromised themselves to providing cheaper oil to some of their immediate neighbours in Latin America and the Caribbean. Mexico is not a member of OPEC, but Venezuela could perhaps help to promote the same principle within OPEC for extension to other parts of the Third World.

It is well known that the economies of the Third World are at stake in the wake of rising oil prices. What has not so yet been fully understood is that the education and scientific development of the Third World are also endangered by the aggravation of foreign exchange problems. Third World access to new discoveries in science, to new books which might be changing the directions of disciplines, to new journals and the continuing accumulation of research findings, is truly endangered as the treasury of foreign reserves gets emptier and emptier. Third World libraries are in danger of being mere archives—a collection of books and journals of historical interest, without the invigoration of new books and the latest issue of a scientific journal.

These then are some of the silent social and economic forces which militate against academic freedom and its parental values of the pursuit of truth and enhancement of knowledge. In this sadse East Africa's problems become a microcosm of Third World problems more generally. Academic freedom, like other forms of liberty, needs to be redefined and encompass genuine ability to pursue academic values, and not merely the absence of authoritarian arbitrariness. The waves of social change, the wells of cultural stagnation, the winds of economic fluctuation, and the storms of politics all have implications for the freedom of the academic. Each in itself can indeed be an impediment to the marriage of academic minds. Like love, truth is not truth which alters when it alteration finds, and bends for the remover to remove. The remover could indeed be a silent social force.

The author is professor of political science and director of the Centre for Afro-American Studies at the University of Michigan. Another article by Mr Mazrui, "Africa and the Battle With Authoritarianism", was published in the THES on November 28.

ARTS

This is the first of the THES's regular monthly arts pages. Each month we will carry news of a wide range of artistic activity in the field of higher education, as well as a brief listing of forthcoming events and an article by a guest writer. Today playwright Howard Barker considers the subject of censorship.

Opposition fit to be sucked

The leading edge of English theatre in the past 20 years has been a Theatre of Blame. The identification of national disease in the lung of the establishment, and an artistic treatment that owes its vigour to a passionate disregard of formal taste and conventional language, has stirred opposition and unease.

This unease manifests itself in a number of ways, from an aloofness and cultural snobbery on the part of establishment critics, whose obsession with "maturity" and "fair-mindedness" conceals a longing for the old corpse of humanism to be shook out again, to the hysterical shudder of the less sophisticated elements of the establishment itself, whose clamour for repression springs from a sense their property is being nicked—their property being the theatre itself. There is an greater service the "controversial play" performs than in exposing the proprietorship of art.

The abolition of censorship, it is now widely recognized, created new linguistic and imagistic opportunities in theatre. In its most degraded and commercialized aspect, more nudity (as opposed to nakedness) more dead sex, certain titillating liberties of speech. Creatively it led to the growth of a language nearer to the spoken English of the street, a proper slaughtering of phoney conventions in dialogue-style.

After the first squirmings, the language settled down, mellified, and then rapidly became a positive barrier to expression.

The defiance of the naturalistic mode became an urgent necessity, and was accompanied by a shifting of theme away from the psychological investigation of representative individuals to social complexity, a movement from sympathy to blame which unlocked an imaginative backlog which had been building up behind the drawing room door and burst onto the stage in a clutter of effects. The 1960s and 1970s saw the reclamation of lost territories and the discarding of a bourgeois mode of presentation which had not happened under Osborne or Pinter, and in this reconquest encountered the hectic opposition to a class happy to watch the dispossessed wail about England's decline, but not to receive the blame for it full in their laps.

All writers of vigorous new plays expect to encounter opposition, and it is always a temptation to regard it as reverse occulate, the sure proof of good-targetting. Shocking one's enemies is an honourable tradition in English art. But the significance of opposition overcomes this. Each occasion of outrage reveals the shallowness of the feigned weariness of the liberal critic, who persistently claims "to have seen everything now". The power of theatre is such that it bursts through its own conventions. My own play about death and profit in the First World War, *The Love of a Good Man*, provoked a chorus of establishment outrage in Oxford and Cambridge, resulting in its banning from the latter, not because it was sacrilegious, unpatriotic, bitter or scatological (though it was all these things), but because its imaginative structure was such that it gave power to these apparently digested things, and regurgitated them in a startling form, forced on the audience a revaluation of its prejudices and flung at them a language restructured in such a way as to be dangerous, subversive and full of pain.

It was of real significance that a play suffused with Anglo-Saxon sexual terminology playing in these same theatres before mine provoked no similar response. It is one thing for the working class to be seen as degraded, sex-obsessed, foul-spoken or emotionally dead, but our rulers? The old theatre, the ancient piece of English expression, draws blood. Cheap, clumsy, free, it has power to wound.

The more celebrated arguments at the National over Howard Brenton's *Romans in Britain* underlined these factors over again. Not that the National is cheap, and the controversy superbly reveals that neither is it free. Who owns the piece? Not the public, clearly, who can at least be relied upon in be curious and supremely incensorious. No, the sick word "National" is degraded again to stand for a clique, the governing clique, who dispense public money as they see fit. At least the old patrons spent their own cash. And once again, the linguistic issues creep in. The play's language is dirty. The pitiful figure of Milton Shulman, enerusted with dead notions like the Titanic heaved off the bed of the sea, declares the writing is bad, dirty and bad. Suddenly, the abusive terms shimmer with dignity. Opposition of this sort is fit to be sucked. The shambling army of the opposition, unsettled by their old enemies, actors, writer and stage, see their palace scandalized, the hall of mirrors, securely reflecting their dignity and truth, suddenly bawls rudely of this nation's sin. The longing for censorship is revealed as an historical twitch which loathes not only offence, but art, which finds art permissible only when possessed and language ever a monster ready to leap. It is simple to see their comic grotesqueness as archaic and polsied, but better to remember their old will to murder, if not by the censorship axe, by the garotte of finance. By writing in the shelter of public money we deliver ourselves to the managers, the officials, the political creatures of cash. Our existence is as precarious as any crematist at any time in our history.

Howard Barker's latest play, No End of Blame *opens at the Oxford Playhouse in February.*

If you would like your arts activities mentioned on this page, send or telephone the details to the **THES**, New Printing House Square, 200 Gray's Inn Road, London WC1X 8EZ (01-837-1234 (Alan Franks, ext. 7251, or Lynne Truse, ext. 7467). We have already had a very good response and will do our best to include as many items as we can. Copy deadline for the January arts page is January 2.

EVENTS

Tuesday, December 16. Great Hall, Goldsmith's College, Vicarage evening. NCOS Orchestra, John Georgiadis.

Until December 21. Sainsbury Centre, University of East Anglia. Andersen Collection of Art Nouveau.

Until December 27. Galerie St Etienne, New York. Gustav Klimt and Egon Schiele: a rare showing of major works.

Until December 31. Warwick Gallery, London. John Maine: recent carvings, with sculpture and drawings 1971-1980.

Until January 11. Cliffe Castle Art Gallery, Keighley, Yorkshire. The Legacy: continuing tradition of north-west coast Indian art.

Until January 5. The Crawford Centre, St Andrews University. Beauty, Beasts and Ballgowns: the work of Lady Henrietta Gilmour.

Until January 11. Whitechapel Art Gallery, London. Max Beckmann: the triptychs.

Friday, January 16. North East London Polytechnic. International Jazz Concert.

Wednesday, January 21. Society for Theatre Research at The Art Workers' Guild, 6 Queen Square, London. Alfred Emmet lectures on A Tributary Theatre: the Questors, 1929-1979.

Wednesday, January 28. Trent Polytechnic. Alison Hornblow (soprano) and David Owen Norris (piano), recital.

From January 20 in March 24. Trent Polytechnic. Ten weekly meetings. Photography: a remarkable medium: tutor, Philip Stokes.

From February 4 to March 25. Trent Polytechnic. Eight weekly meetings. An Introduction to Literary Criticism: tutor, Neville Coulding.

From February 11 to March 20. Hayward Gallery, London. Edward Munch, the art and the artist.

It has taken Professor Reginald Dodwell of Manchester University's Whitworth Art Gallery eight years to negotiate a unique loan from the State Jewish Museum in Prague.

It is called *Jewish Art Treasures From Prague*, and runs at the gallery until Tuesday.

Above is a detail from one of the photographs on display, *Transportation of Jews from Plzen to Terezin*.

The ironic significance of the exhibition is that most of the collection was originally assembled by the Nazis as their record of an "extinct race". Part of the exhibition indicates the development of the Jewish Museum itself. In 1940 it was merely a few works of religious art gathered by enthusiasts, but by the end of the war it was the greatest collection of Jewish objects ever brought together.

Almost 300 examples of Jewish art are on display. These include synagogue textiles from the mid-seventeenth century.

This is the thirtieth anniversary of the museum's foundation, and the exhibition has been mounted under the auspices of the Czechoslovak Ministry of Culture.

William Shakespeare, pictured here on a recent visit to the Cumbrian town of Ulverston, has gone into the serious business of Foolery.

The Bard, alias Phillip Ryder, was until recently performing at universities and schools.

Ryder, who studied English and drama at Manchester University and then took a Certificate of Education at Keele, had perfected an act based on his complete immersion in the Shakespeare persona. Depending on the level of interest among his audiences he was able to field questions about sources and influence in the plays, as well as avoid embarrassment about the identity of the Dark Lady of the Sonnets.

Now he has, at least temporarily, abandoned Will in favour of a creature of his own invention, Peterkin Mortalmou. The name is no anagram of three great Elizabethan stage fools, Tarleton, Kemp and Armin. His programme includes songs, ballads and dances from sending others, Playford, Arbeau and Susato.

Mortalman's credentials are impeccable, having danced with Queen Elizabeth (the first one) and acted with Richard Burbage.

LSE plans Third World Exhibition

The LSE's campaign to counter the effects of Government policy on overseas students grows more intense by the week.

Plans are well advanced for the school's *Third World Art Exhibition* next March, proceeds from which will help the LSE's 1980s Fund from its present figure of £860,000 towards the £2m target. The fund's purpose is to help finance well qualified students unable to meet the full cost.

The exhibition's coordinator, Mrs Yvonne Craig hopes that in a separate showing at a later date the exhibitors will also be able to make some money from their own sales.

Acting on Mrs Craig items to look out for include those of former LSE student Yuksel Soylemez, Turkey's Consul General in Britain, and Nadir Tharani, a young Tanzanian who has been promised a one-man show at the Commonwealth Institute.

From the cover of the current LSE magazine, by Nadir Tharani.

Help and advice for the exhibition are coming from the British Council, the embassies whose students come to LSE, and various cultural organisations such as the Commonwealth Arts Association.

There is hope for all those who have missed the Peter Mackarell exhibition, *An Interior Journey*, which ends today at the Dixon Gallery in the University of London Institute of Education. Those much-praised paintings will reconvene at Goldsmiths' College, New Cross, between January 12 and February 13.

The works chronicle their author's loss and recovery of vision. Mackarell became ill in February with a virus which now looks certain to be multiple sclerosis. He kept notes of his experiences, and the resulting paintings have been described by Dr Gordon Jackson, senior registrar at Guy's as "a unique record of the subjective experience of this sort of visual loss".

After Goldsmith's they go on permanent display at Guy's.

Philosophy and the arts have met at Lancaster University. A course is now available there which applies philosophical enquiry and analysis to problems that may arise out of the study of literary, visual, musical and theatrical forms.

All course students will take a specially designed programme taught by members of the participating departments. These include English, French, German, Italian, Russian, art and environmental media, theatre studies, classics and archeology, sociology and psychology.

Says Professor Frank Sibley of the philosophy department: Students of the arts frequently find themselves faced with underlying problems and presuppositions as they attempt to understand and evaluate works of literature, music and other arts. Since many of the questions raised are basically philosophical, they are unable, without an adequate philosophical training, to pursue their interest in these problems satisfactorily."

A collection of decorative art now in the possession of Middlesex Polytechnic is on view at the Museum of London until the end of January. The exhibits derive from the Silver Studio founded by Arthur Silver and later run by his son Rex until its closure in 1963. For the 80 years of its life the studio was responsible for 30,000 designs for advertisements, book jackets, furniture, stencils and the like.

The poly points out that the Silvers have not enjoyed their fair share of acclaim in the past simply because of the manufacturers' reluctance to allow crediting their designers. The collection was presented to the College of Art in 1967 by Rex Silver's step-daughter, Miss Peg Peerless, and became part of Middlesex archives when the college was merged into Middlesex Polytechnic in 1973.

Essex University's drama department lives in the hope of seeing its most recent production, *Landmark*, make its mark on London. Last week director Colin Langdon-Mead was muted in his optimism, although there had been expressions of interest from the Half Moon and the RSC Warehouse. The play is substantially its own (substantially only since he was aided and abetted by the resident playwright Steve Gooch, and views the nuclear question from a local angle.

Despite the legacy of campus activism, *Landmark* is not as didactic as you might expect—certainly less so than the Alisa Free's recent touring production of *Power Plays*. Langdon-Mead defines it as "anti-nuclear, but not necessarily anti-nuclear".

It was commissioned by Essex and the Arts Council, but the theatre aspect is only half its function: students taking part have been required to keep notes on the development of the play, from its conception to its performance, and the whole project accounts for 30 per cent of their course work.

Cruise missiles permitting, the town of Newport should have an exhaustive record of its domestic life by the year 1990. The documentary photography department of Gwent College of Higher Education has embarked on a pictorial record to span the decade.

The first of the 10 projects, *The Family*, is published next week and contains 200 photos of 28 families who agreed to "sit" for the survey. It is edited by Sir Tom Hopkinson, former editor of *Picture Post*, recently retired director of the School of Journalism at University College, Cardiff. Under Sir Tom's direction and with the supervision of photography lecturers John Charity and Ron McKeown the students took almost 10,000 photos.

Publication coincides with an exhibition, *Newport Families*, at the Newport Art Gallery, Faith Front Square, until December 13. Admission is free.

The Arts Council is organizing the first retrospective exhibition for London of work by William Johnstone, former principal of two major art colleges—the Cumbrian and Central Schools. The selection has been made by Paul Overy, and covers from the 1920s to the present day. There are approximately 100 paintings, 50 works on paper, 40 plasters and 10 sculptures, as well as the lithographic accompany poems by Hugh MacDiarmid and Edwin Muir.

The exhibition opens at the Hayward Gallery on February 11 and runs until March 23.

The second of the council's one-month courses for arts administrators will take place from January 19 to February 20 at City University Centre for Advanced Studies, Northampton Square, London. The course, which costs £150, is designed to help administrators working in galleries, theatres, arts centres, opera and dance companies and orchestras at the start of their careers. It covers basic skills such as book-keeping, budgeting and licensing.

The Crafts Study Centre at Holburne Museum, Bath, has mounted a display of Bernard Leach's pots, on loan from Ivan Daniel and Ron Geesin, to celebrate the centenary of the pioneer studio potters, or their collection of Japanese and Korean pots, or their own work, or their glaze recipes, to the choice. The exhibition runs until January 22.

Alan Fr

BOOKS

The constricted world of the critic

Criticism in the Wilderness: the study of literature today
Geoffrey H. Hartman
Yale University Press, £11.40
ISBN 0 300 02085 6

Beyond the New Criticism
Frank Lentricchia
Cambridge Press, £14.50
ISBN 0 485 11208 6

Denis Donoghue

Coleridge said that all philosophers are either Platonists or Aristotelians; Northrop Frye, that all literary critics are either *Iliad* critics or Odyssey critics. A further pairing suggests itself as especially applicable to contemporary criticism, that critics are either politics-critics or philosophy-critics. For the moment, the wind favours the philosophy-critics. An innocent reader might think that literary criticism is a branch or phase of mood of philosophy, and that the enterprise does not need poems, plays, or novels.

Geoffrey Hartman's new collection of essays discusses a question which is not necessarily a problem: what good is literary criticism at a time of mass education? The ordinary answer is that a critic can teach what it means to read well, a demonstration particularly urgent if there is evidence that most people do not read well. Further, when we read a work of art, we study the human imagination as a form of freedom; the imagination is that kind in the aspect of its freedom. The fact that such freedom is finite does not render the assumption null. Further still, if the literary critic is employed to teach in a classroom, he normally regards teaching as the civic form of his talent: in teaching he speaks, explains, argues, persuades, and generally observes the decency of communication. That is enough to be going on with.

But it is not enough for Geoffrey Hartman. He finds such a procedure constricting. He resents its correction, which he has practised for many years, by which criticism is deemed to be a secondary activity, subservient to the literature it reads. The convention that Hartman calls "the Arnoldian concordat", the axiom that a critic must serve his master, the poem, and observe the decorum of a modest if useful skill. Hartman regards the convention as a neo-classical conspiracy, maintained just barely by T. S. Eliot and Lionel Trilling as by Arnold, and he associates it with the minor virtues, politeness, and the cleanliness next to godliness. He finds a fear of Trilling for worrying from "the paradox of teaching works of literature so unlike the position he writes". The same fear was better made by R. P. Blackmur, incidentally, when he said that Trilling always cultivated and never entirely his own but diversely to some extent what he understands to be the mind of a poem".

Hartman does not believe that literary criticism is such a thing as "the mind of society", so he now cultivates a mind only and entirely his own. He will not subscribe to the value the Arnoldian concordat places upon the notions of society, tradition, the classics and little usefulness in his early books he was at pains to practise literary criticism and literary history, conventions he deplored. But in recent years he has lost faith in literary history, and he is now demanding that criticism transform itself into poetry. The demand has a precedent in Friedrich Schlegel's statement that "the work of criticism is fugitive unless it is itself a work of art, independent of the art it criticizes as much as it takes its materials that they want to be". If this were agreed, it would release the critic from neo-classical forms of decorum and give the free run of enthusiasm, wit, and the thrill of authority. Hartman's precursors in freedom are Coleridge, Carlyle, Nietzsche, Pater, Ortega, Heidegger, and Derrida; of these writers what they produced were works of indeterminate character, neither fiction nor criticism, or miscellaneous, being, as Coleridge said of his own *Biographia Literaria*, "a medley of literary criticism, philosophy, and poetry".

Hartman's *Criticism in the Wilderness* is a miscellaneous book, with a subtitle, *The Study of Literature Today*, which is misleading, since the book is not a survey of the study of literature but a sustained meditation on the possibility of literature, and on the possibility of criticism as a form of literature. The book is in three parts, the first a long introduction to the second, which is a series of essays on Wordsworth, Coleridge, Keats, Shelley, Baudelaire, Rilke, Valéry, Proust, Mallarmé, Blanchot, Derrida, Barthes, Foucault, Lacoue-Labarthe, Nancy, Lacoue-Labarthe and Nancy, Lacan, Todorov, Genette, Starobinski, Jean Hyppolite, Jean Rousset, Jean Ricardou, Jean-Pierre Richard, Jean-Pierre Vernant, Jean-Pierre Vernant and Pierre Vidal-Naquet, Jean-Pierre Vernant and Marcel Detienne, Jean-Pierre Vernant and Françoise Frontisi-Ducroux, Jean-Pierre Vernant and Nicole Loraux, Jean-Pierre Vernant and Jean-Paul Dumont, Jean-Pierre Vernant and Jean-Pierre Faye, Jean-Pierre Vernant and Jean-Pierre Faye and Marcel Detienne, Jean-Pierre Vernant and Jean-Pierre Faye and Marcel Detienne and Jean-Pierre Vernant, Jean-Pierre Vernant and Jean-Pierre Faye and Marcel Detienne and

BOOKS

The TUC's access to political power

TUC: the growth of a pressure group 1868-1976
by Ross M. Martin
Clarendon Press: Oxford University Press, £14.00
ISBN 0 19 822475 3

The no-men's land which lies between the history of institutions such as the TUC and the analysis of government and political parties, is hostile to investigation not simply because of past secrecy or surviving myths about "illegitimate" activity, or even operation of the thirty-year rule but because institutions, parties and the state apparatus differ generically, respond to different constituencies, and are changed in response to different forces. The historian or political scientist who tries to chart the growth of political influence needs a highly flexible methodology and the ability to muster obscure, dull or tantalizingly incomplete archives.

Professor Martin sets out to trace the evolution of the TUC from 1868 as a pressure group (a term he carefully qualifies), its fluctuating influence on government, and its authority over constituent unions. Deriving his methodology from Beer and, more particularly, Eckstein's work on pressure groups, he applies it to a fairly long historical period. For reasons which, initially at least, are valid, access to the seat of political power is taken as an index of influence.

Unfortunately what the early stages of the narrative gain from measuring an activity that can easily be documented from the TUC's own archives is progressively eroded during the period after 1915; and a reliance on published, often outdated literature to bolster TUC sources leads to one-sided, even misleading interpretations of general episodes (such as the late 1920s "rationalization") or particular matters (such as the 1924 dispute about the TUC seeing drafts of industrial bills before introduction to Parliament—a practice introduced in 1919 and interrupted by MacDonald, avid for "constitutional" proprieties).

As a catalogue *raisonnée* of the TUC's published relations with government, its deputations to ministers, and the responses passed on to constituent unions, together with Martin's sound assessment of the TUC's often extravagant claims to influence, the narrative chapters constitute a useful addition to trades union history. Through them emerges a more general sense of cultural change, the increasing sophistication of the General Council in contrast to the naivety of the old Parliamentary Committee, and its authority over constituent unions. Deriving his methodology from Beer and, more particularly, Eckstein's work on pressure groups, he applies it to a fairly long historical period. For reasons which, initially at least, are valid, access to the seat of political power is taken as an index of influence.

Unfortunately what the early stages of the narrative gain from measuring an activity that can easily be documented from the TUC's own archives is progressively eroded during the period after 1915; and a reliance on published, often outdated literature to bolster TUC sources leads to one-sided, even misleading interpretations of general episodes (such as the late 1920s "rationalization") or particular matters (such as the 1924 dispute about the TUC seeing drafts of industrial bills before introduction to Parliament—a practice introduced in 1919 and interrupted by MacDonald, avid for "constitutional" proprieties).

As a catalogue *raisonnée* of the TUC's published relations with government, its deputations to ministers, and the responses passed on to constituent unions, together with Martin's sound assessment of the TUC's often extravagant claims to influence, the narrative chapters constitute a useful addition to trades union history. Through them emerges a more general sense of cultural change, the increasing sophistication of the General Council in contrast to the naivety of the old Parliamentary Committee, and its authority over constituent unions. Deriving his methodology from Beer and, more particularly, Eckstein's work on pressure groups, he applies it to a fairly long historical period. For reasons which, initially at least, are valid, access to the seat of political power is taken as an index of influence.

Unfortunately what the early stages of the narrative gain from

Letting the facts speak for themselves

British Coalminers in the Nineteenth Century: a social history
by John Benson
Gill & Macmillan, £15.00
ISBN 0 7171 0880 7

John Benson is surely right to demand the lack of serious attention paid to the social history of the British colliers. Institutional trade-union history has long been dominant in this field, with the voice and aspirations of the coalminers too readily encapsulated in and so often distorted by the "official" manifesto or the dusty committee minute. Benson's enthusiasm for correcting this imbalance is obvious from the impressive array of primary (or near-primary) material he has collected for evidence of the miner at work, home, and at play. He has, in addition, provided a very brief account of the nineteenth-century growth of the industry together with some welcome details of earnings (as distinct from wage rates) and of the varying types of mining settlement to be found in the coal-producing regions.

The result can be read with profit by both layman and specialist. It is sometimes humorous, regularly informative (especially in details of working methods, leisure activities and self-help provision) and notably consistent in purpose. However, its achievements do not altogether compensate for its more obvious shortcomings. There is little in Benson's book of the "new" social history, his approach being distinctly descriptive, avoiding theoretical underpinning or sociological scaffolding. More to the point, however, is the extent to which he has let the facts speak for themselves. He overemphasizes points by providing a number of fairly similar quotations; and considers it an adequate representation of the distinctive regionalism of the industry if the documented evidence is shown to be varied in its geographical scope. But there is virtually no discussion of the interpretative value of the social evidence either for the student of mining history or of labour history in general. Were contemporary attitudes to collective bargaining, technology and direct action influenced by the prevailing social customs, life styles and working habits in the various coalfields?

Will the economic historian anxious to understand productivity fluctuations in nineteenth-century coalmining interpret the available statistical data more authoritatively if he understands the attitudes and customs surrounding relations at the coal face in Durham compared, say, with those in South Wales or Derbyshire? Did the miners succeed in any way in using their knowledge of working practices in the industry or the particular bonds forged between different classes of workman to their advantage in negotiations over wages and conditions? If so, how did these influences vary between regions and what importance should we attach to the weight of "social" factors as against economic, political or institutional ones?

If Benson had concentrated on relating his narrative to the wider aspects of the development of British mining in the nineteenth century, he would have identified the social history element of the story more instructively and made it more difficult for the subject to be as neglected in the future as it has been in the past.

As it is, he has provided students of the industry with a useful and generally well-written book, but one which will still require reference to the more familiar texts for its value to be fully appreciated.

W. R. Garside

W. R. Garside is senior lecturer in economic history at the University of Birmingham.

The UK's national ledger

Balance of Payments Theory and the United Kingdom Experience
by A. P. Thirlwall
Macmillan, £15.00 and £6.50
ISBN 0 333 24367 6 and 24368 4

The United Kingdom is a small open economy, thus the net income of economic transactions with the rest of the world is of importance to its prosperity and growth and to the welfare of its inhabitants. These transactions are usefully summed up in a country's "balance of payments", which concept forms the subject of Thirlwall's book.

The balance of payments account indicates a country's relative economic strength; it is also an index of the success (or otherwise) of its economic policies. During the 1960s the relative strength of the United Kingdom's balance of payments was regarded with favour, but the persistent imbalances during the 1960s and 1970s were taken to indicate some fundamental problem within the economy, and these acted as an effective constraint upon its expansion, giving rise to the familiar "stop-go" cycles of the period.

Despite the great importance of the topic for a thorough understanding of applied economics in the United Kingdom, there has not existed until now an authoritative book which brings within the grasp of the majority of students the essentials of balance of payments theory and practice. In this book Professor Thirlwall compares and appraises critically the many varied approaches to the balance of payments while offering much more than a straightforward survey of the literature. He presents the student with new ways of studying balance of payments theory, and this is especially true in his discussion of the foreign trade multiplier and of conventional adjustment mechanisms.

Thirlwall opens with a clear exposition of the balance of payments accounts and a discussion of the operation of the foreign exchange market, and continues with a careful definition and discussion of equilibrium on the balance of payments. The question he poses is: "Should equilibrium be defined regardless of the level of restrictions, such as the development of other domestic goals?" Given this general equilibrium approach he readily demonstrates that there can be no such thing as the equilibrium exchange rate, and no unique balance of payments equilibrium. He compares the conventionally derived foreign trade multiplier (to his preferred (and more realistic) multiplier which relates income to expenditure rather than to income. This is then followed by extensive discussions of the elasticity approach, the absorption approach and monetary approach to the balance of payments; internal and external balance; import functions; and export functions. A detailed history of the United Kingdom balance of payments up to 1977, including a polemic on the floating pound in 1972, is presented in chapter seven.

The last two chapters are particularly interesting and a careful reading is extremely rewarding. Here Thirlwall discusses the importance of export-led growth; presenting an export-led growth model with a balance of payments constraint. He treats the balance of payments as a structural problem through a consideration of non-price determinants of exports and imports and topics such as North Sea oil and de-industrialization.

The book is up to date, fresh and stimulating. In its approach, authoritative and imaginative in its presentation and clear in its style. It is aimed at an unspecified undergraduate market but much of it is accessible to first-year students. Thirlwall is to be congratulated for writing yet another book that will appear an essential reading on undergraduate reading lists.

P. M. Jackson

Professor Jackson is head of the economics department and director of the Public Sector Economics Research Centre at the University of Leicester.

FRANK CASS

NEW JOURNALS from FRANK CASS

ARMS CONTROL
Editor Ian Bellany and Carl D. Macklin
Published three times a year
Institutions: £30.00 Individuals: £18.00

SLAVERY AND ABOLITION
A Journal of Comparative Studies
Editor John Ralph Willis and C. Duncan Rice
Published thrice yearly
Institutions: £30.00 Individuals: £18.00

THE JOURNAL OF LEGAL HISTORY
Ed: Alfred Kinsey
Asst. ed. Jeffrey Pilcher
Published three times a year
Institutions: £30.00 Individuals: £18.00

MEDIA LAW AND PRACTICE
Ed: David Goldberg
Associate eds. Averil C. Palmer and Leslie E. Chalmers
Published three times a year
Institutions: £30.00 Individuals: £18.00

PEACE STUDIES
Edit Philip Dodd and Ronald J. Crawford
Published three times a year
Institutions: £22.50 Individuals: £15.00

THE JOURNAL OF STRATEGIC STUDIES
Edit. Anne Pedersen and John Garnett
Published three times a year
Institutions: £30.00 Individuals: £18.00

WEST EUROPEAN POLITICS
Edit. Gordon Smith and Vincent Wright
Published three times a year
Institutions: £30.00, Individuals: £18.00

Please write to our Subscriptions Department for further information. All prices include Accelerated Surface Post to the U.S.A. Payment may be made in dollars at the current exchange rate.

FRANK CASS
Gainsborough House, 11 Gainsborough Road, London E11 1RS, England.
Tel: 01 530 4226 Telex: 897129

Moving the goods

Transport Economics
by P. C. Stubbs, W. J. Tyson & M. Q. Dalvi
Allen & Unwin, £11.00 and £5.50
ISBN 0 04 338088 3 and 338096 6

Even though stages of the industrial revolution in Britain began under the names of steam age and the railway age, the importance of transport to public development still has to be stated. Reductions in the transport allow production in larger market area to be centralized in a single place, and in turn allows producers to take advantage of whatever economies of scale may be possible. The absence of great economies of scale the reduction in transport costs allows greater choice by the consumer as the products of competing manufacturing centres become cheaper.

It follows that the cost of transport is a major factor in determining the pattern of location and technology which can be used. These interrelationships are the basis for the economics of location, one of the most neglected fields of economics, particularly in Britain. To their credit Stubbs, Tyson and Dalvi include chapters on "spatial equilibrium" and "models of passenger traffic" in their book, the first outlines elements of location theory, the second elements of modelling urban and inter-urban passenger travel.

The authors seem to have felt that because these subjects are rarely dealt with in texts on transport economics they are only suitable for more advanced students and so these chapters are directed at a higher level than the rest of the book. This is a pity because the opportunity is lost of showing, using simple comparative statics, the way in which factors in the cost of transport will alter patterns of location, which in turn affect the demand for transport. The interconnection is, after all, what much work in urban location theory over the past twenty years has attempted to explore; however, a great deal of this work has been by former transport economists who have realized that urban transport problems can only be understood by an understanding of urban location.

Considered solely as a textbook for courses in transport economics this book should be reasonably successful. Unlike almost all other transport texts it does not concentrate exclusively on urban transport problems but includes chapters on airlines and shipping.

Other areas covered are the analysis of demand and supply, pricing policies, investment with special attention to cost-benefit analysis and government transport policies. It covers these topics well; any unevenness is probably due to the multiple authorship. The authors give copious references and reproduce whole tables, instead of presenting only the essential information. While this may help the teacher and the advanced student, it may confuse weaker students.

Alan W. Evans

Alan Evans is reader in environmental economics at the University of Reading.

Price control

J. K. Galbraith's *A Theory of Price Control* (1952) has recently been reissued by Harvard University Press as £4.50 and £1.95 in paperback. The new edition has been produced by Harvard University Press as a reprint of the original edition. The book discusses the relevance of wage and price control, when dealing with the present inflation. The book deals with the relationship between wages and prices in the highly organized sector of the economy and the unorganized sector. It would seem, however, that the book is not now, if it ever was, the right answer to inflation. But the book is still a useful guide to the part of any complete strategy, including their place in the fiscal policy, continued limits on bank lending, direct restraint on consumer credit, and other energy conservation with the possible release of pressure on prices.

BOOKS

Painless prayers for the 1980s

The Alternative Service Book 1980
Cambridge University Press/Clowes/SPCK/Oxford University Press/Hodder & Stoughton, with or without Psalter, £3.50-£4.50

Fabulic as it undoubtedly is, the Church of England's new liturgy represents a modified victory for public opinion. Some of the major indecencies in "Series 3" have been quietly suppressed—the Lord's Prayer, for instance, has been restored to something like its ancient form—and the whole fare-rego has been labelled "1980", so as to emphasize its impermanence. (It is, in fact, only licensed for nine years, but that should not be a cause for complacency; in the General Synod's present mood it is likely to replace it by something worse, not better.)

I can understand our synodists being irritated by the presumption of avowed unbelievers in criticizing their work; but they should realize that many believers are equally hostile, and with greater reason—they have to use the thing. So varied and sustained has been the outcry against the language of this new liturgy that anything I say will be plagiarism, but this is no excuse for silence. We know that the late twentieth century is not an era of great writing, yet a committee of the kind which draw up *ASB 80* is by its nature incapable even of decent, agreeable prose. Granted that the sublime language of 1662 is out of date and in some few instances inappropriate, then the right procedure would be carefully to modify it, retaining not necessarily the actual words, but the balance and poise of the original. This is what the editors of the Revised Standard Version of the Bible did with the Authorised Version, and with great success. Instead our synodists, like the unlucky editors of the *NEB* ("Naddy's Easy Bible") have arrogantly plumped for an entirely new version without having the literary or (I think) the spiritual gifts to carry it off. But the *NEB* cannot stand up even to the challenge of the Good News Bible, which despite its staccato, *Daily Mirror* prose, has the essential merit of conviction, and *ASB 80* will no doubt follow. What we want in the 1990s is a new Prayer Book humbly and reverantly modelled on the great historic original of 1662.

I doubt very much if the majority of churchgoers, old or young, want to worship God in "everyday speech"; they do not want to conduct the dialogue of Holy Communion in the same terms as they have just used to discuss the fortunes of their local football team or the relative merits of Mrs Thatcher and Mr Foot over the breakfast table. They do not want to get married in church with no more solemnity and dignity than they could find in any well-conducted registry office. It is not as if our liturgical tinkerers have any great fluency in twentieth-century demotic anyway. They have already been criticized, and rightly so, for multiplying God at the beginning of the *Te Deum* that he is God—"You are God and we praise you"—yet Cranmer hurdled the difficulty with telling ease, with "We praise thee, O God: we acknowledge thee to be the Lord". Yet on almost every page the authors betray their total ignorance of natural speech rhythms. For instance, the response in the priest's salutation, "The Lord be with you", is now "And also with you"; a piece of banality which goes down, not up, at the end, and seems to crave the addition of a final word (possibly "mate", or "chum"). A simple transposition to "And with you also" would resolve the difficulty. Worse still, these tin-eared tyros cannot leave Cranmer's (or Coverdale's) prose alone even when there is no obvious reason for alteration. For instance, why have they altered "He has scattered the proud in the imagination of their hearts", in the *Magnificat*, to "In their conceit"? And do they really think that their opening to the *Nunc Dimittis*, "Lord, now you let your servant go in peace", is superior to "Lord, now lettest thou thy servant depart in peace"? The substitution of "go" for "depart" is a killer.

The general effect is one of jarkiness, particularly in the Communion. In fact, the rite is now a string of discrete incidents having no obvious connexion one with another; any sense of progression towards a climax is lost. But it is not so much the literary debility of *ASB 80* which worries me as its spiritual impoverishment, which is too typical of many parish clergy at this time. Now that we have apparently thrown out the Thirty-Nine Articles—a decisive change, of dubious legality, which has gone unnoticed—the last pretence of pastoral discipline is abandoned. Anyone can believe anything. This new book reeks of a vulgar, catch-penny Christianity whose sole aim is to lure a landlocan congregation out of the greenhouse or off the golf course. Possibly Cranmer put too much emphasis on Original Sin, too little on Redemption; too much on the Crucifixion, not enough on the Resurrection. But now the emphasis is wildly reversed. The confession is hurried, conventional and platitudinous; no humility, no abasement, indeed, no regrets. The painless advantages of closing with Christianity are emphasized to the limit: a trip to the altar, a nibble and a sip, and you're A-OK. No sweat, no doubts, and a prize for everyone in the raffle. In 1662 our forefathers were encouraged to limpe that God had noticed their existence; in 1980 he is expected to be gratified that we have noticed his.

I see that in one of three alternative communion rites they have retained Cranmer's prayer of Humble Access, (beginning "We do not presume to come to this thy table, merciful Lord, trusting in our own righteousnees"), and it stands out like a sore thumb; it will have to go in the next rescension because it makes everything else look tawdry. It is not the fact that none of our synodists have the literary ability to compose such a prayer which depresses me, as the fact that they do not, on the evidence before me, have the necessary humility, spirituality or grandeur of mind. They have indeed trusted too much in their own righteousness; let us hope that they are soon scattered in the imagination of their hearts.

J. P. Kenyon

J. P. Kenyon is professor of history at the University of Hull.

Great alchemical enthusiasm

The Chemical Theatre
by Charles Nicholl
Routledge & Kegan Paul, £13.50
ISBN 0 7100 0815 6

The opening chapters of this book suck the reader into an expansion, made with great verve, of the alchemical treatises published in Shakespeare's time. Charles Nicholl sets out to show that the ambition of the serious alchemist was truly philosophical in seeking to create a form of matter "redeemed from baseness, dividedness and corruption". Man like John Dee aimed at nothing short of perfection, and for them the purpose of experiment was far removed from the attempts to transform base metals into gold published in Jonson's *The Alchemist*. The search for the philosopher's stone became rather "a manipulation of the cosmic powers in chemical guise, an emblematic performance within the tiny glass of the hermetic vessel".

This heady stuff was presented in alchemical treatises in a kind of code language, designed to protect "science" against the impure and uninitiated". Arcane significances and spiritual analogies were obliquely suggested by the poetic and dramatic images used to describe alchemical "processes as battles, feastings, purifyings, phantasmagoric copulations, deaths, entombments and rebirths". The vessel in which these activities took place might be called a castle, a bed, a garden or a grave; according to the various stages of chemical reactions. Mr Nicholl claims that the language of alchemy was "anything but secret" by the beginning of the seventeenth century, and that the appearance of a few treatises in England at this time testifies to "great alchemical enthusiasm". From this it is an easy leap, via Jonson and Donne, to the "central assertion of the book": that *King Lear*, as in this example from Act I:

> If we look again at the words of Cordelia's wooer, France, we find a beautiful and covert image of her volatility: "I take up what's cast" away, the escent of the liberated *animo*. This fleeing Mercury is also the Paracelsist *arcanum*, full of healing "virtues": so France says "thee and thy virtues here I seize upon".
> This kind of analysis is enough to convert anyone to Surly's point of view. In the text Cordelia has literally been cast away by Lear and Burgundy, but not because of any "vicious blot" on her, and so France takes her:
> Most choice forsaken, and most loved despised,
> Thee and thy virtues here I seize upon,
> Be it lawful I take up what's cast away.

Here, as generally elsewhere, there is no need to look for covert significances. The alchemists borrowed their imagery from poetry, emblem and allegory, and it would be strange indeed if Shakespeare found a need to raid their works. Mr Nicholl brings out some interesting analogies, but his claim that alchemy played a central role in Shakespeare's own thinking about *Lear*" cannot be taken seriously.

R. A. Foakes

R. A. Foakes is professor of English at the University of Kent.

METHUEN

Methuen & Co Ltd
11 New Fetter Lane
London EC4P 4EE

Methuen Inc
733 Third Avenue
New York NY 10017

Small Groups and Personal Change
Edited by PETER B SMITH
Psychology in Progress

Recently there has been a large growth in the small group movement in such areas as sensitivity training, encounter groups, therapeutic communities, social work groups and organization development. The essays in this book examine such questions as which kind of group work under which conditions, with which style of leadership, and which individuals are likely to produce desirable outcomes in different fields.

256 pages
Hardback 0 416 72790 5 £9.00
Paperback 0 416 72800 6 £4.95

Made for Life
Coping, competence and cognition
JOHANNA TURNER

Made for Life considers the relationship between feeling able to cope and being able to learn – that is, the interdependence of affect and cognition in children under five. It argues that in order to make full use of his cognitive capacities the child must first develop the belief that he is able to cope and be effective.

192 pages
Hardback 0 416 72690 9 £8.00
Paperback 0 416 72700 X £3.95

The Geography of Public Finance
Welfare under fiscal federalism and local government finance
R J BENNETT

In this authoritative study, R J Bennett addresses himself to the 'geography' of public finance, examining who receives what benefit, where, and at what cost, from the social services. He adopts an integrated approach to taxes, benefits and intergovernmental grants, drawing empirical examples from a wide range of countries including the USA, UK, Canada, Australia and the nations of Europe.

512 pages
Hardback 0 416 73090 6 £16.50

Eleven British Poets
An anthology edited by Michael Schmidt

In compiling this anthology, Michael Schmidt has presented an exceptionally valuable selection of the work of those poets who have significantly influenced the development of post-war British poetry.

The spectrum of poets represented is wide, including chapters on the work of W S Graham, Donald Davie, Charles Tomlinson, Thom Gunn, and Seamus Heaney. Each poet is briefly introduced and difficult and obscure passages are footnoted.

224 pages
Hardback 0 416 72890 1 £8.95
Paperback 0 416 72900 2 £3.95
Limp edition 0 423 50780 X £2.95 non-net

Symbolism
An anthology edited by T G WEST

This anthology brings together essays by eight writers associated with symbolism in literature – including W B Yeats, R M Rilke, Wallace Stevens and Alexandr Blok. It aims to provide readers of English with material to complement the study of one or more national literatures during the period of symbolist activity.

168 pages
Hardback 0 416 71890 6 £5.95
Paperback 0 416 71900 7 £2.95

Fourth Edition
A History of the Roman World 753 to 146 BC
H H SCULLARD

Professor Scullard's study of Roman history from earliest times to the Age of the Great Conquests has long since established itself as the standard textbook on the subject. Since the publication of the third edition in 1961 a considerable amount of archaeological research has been carried out, and much of interest has come to light, in particular on the earliest phases of the period and on the cultural environments in which the Romans emerged into the light of history.

576 pages
Hardback 0 416 71480 3 £12.00
Paperback 0 416 71490 0 £6.75

All prices are net in the UK only

BOOKS

Race relations on the personality level

The Psychodynamics of Race: vicious and benign spirals
by Rae Sherwood
Harvester Press, £28.00
ISBN 0 85527 996 6

The Psychology of Apartheid
by Peter Lombley
Seeker & Warburg, £9.75
ISBN 0 436 24905 5

The psychoanalytic approach to the study of race relations, especially that stemming from Erich Fromm, the Frankfurt School, and the Authoritarian Personality Studies, once enjoyed a certain pre-eminence, but the striking thing about more recent studies, particularly in Britain, is that they have moved towards a more political and sociological approach. The meaning of racism tends now to be understood more in terms of its function as ideology supporting class and other group interests. Too often however this approach has employed pseudo-scientific methods with a view to discovering causal relations and correlations, and the actors' subjective understanding has been lost.

In these circumstances Rae Sherwood's lengthy, detailed analysis of the case histories of three families, one Barbadian, one English working-class and one Sikh, is very welcome. True one may ask whether these families, chosen on the recommendation of GPs in a district of London, are in any way representative, but at least we have here the disclosure of life histories which tell us more about relations between one action and another than we could hope to learn from the most representative statistical sample.

Mr Jaones, the Barbadian, emerges as a decent sensible sort of man who grew up in Barbados in a black family of slightly above average income and who accepted as inevitable a world of white cultural and racial supremacy. He comes to England as great personal cost, leaving his wife and children in the care of his mother, and over a period of about ten years reunites at least part of his family. By dint large his new life works. He doesn't make too much fuss about racism, at least until the Powell speech, and succeeds in living as a privatized man with his family. If racial problems worry him at all, they do so in terms of a certain caution about, if not fear of, his Indian neighbours. His wife and children fit into this framework and, though more exposed to the threats and dangers of their situation and therefore inclined to occasional emotional outbursts, by and large they manage to fence their world around.

Mr Chattaway is altogether more disturbed. He and his wife both come from broken homes and his world is a violent one in which apparently accidental events lead to people being literally crippled. He confesses to unpunished crimes (car theft as a young man) and accepts fighting and violence as part of everyday life. He reads *Combat*, approves of the National Front, and takes some delight in driving his car at Indians if he finds them crossing against the lights. His young adult son is a skinhead who normally fights grasers and rockers, but on occasion enjoys an alliance with them in battles against the "Pokis". Mrs Chattaway is more balanced than her husband and children but the anxieties they induce in her are projected on to India youths whom she finds menacing and whom she thinks carry knives. There is also a (rather inadequate) daughter whose late puberty is a source of worry to the family.

Baldev Singh is something of a comic opera figure, a middle-class Sikh who really loved the British Raj. He served as a clerk to officers whom he considered men of "good breeding", "good blood" and of decent educational standards—people to be admired and emulated. He went into the film business, had an arranged marriage and employed servants. When his business failed, he left behind his newly pregnant wife, and set out to find his fortune in London. There he led a jolly life until his money ran out and he found himself in danger of being confused with the dirty uneducated peasants who started to flood in from Jullunder. Fortunately his most excellent wife arrives and made him more responsible, even to the extent of taking a job in a steel works. He is now in a clerical job at Heathrow Airport, and his wife manages things behind the scenes. Though his young son's education has been interrupted by the need to go back to India for long visits because of his asthma, both the boy and his elder sister are doing well. Because Baldev allows her some freedom in the area of marriage plans, the daughter is not seriously in conflict with her parents, and, after a dismal and unsuccessful time on the labour market, now works with white girls in the bank and toys with the idea of even greater westernization and freedom in Canada.

A political analysis is excluded from Rae Sherwood's book. Her concern is with how these 16 people handle their conflicts on the personality level. In these terms, of course, James has done well. He is not letting his unresolved conflicts drive him to irrational action. His wife and children too contain their conflicts most of the time, and, when they do show anxiety and tension, express it quite harmlessly about groups without necessarily racial overtones. Mr Chattaway is more of a case. His conflicts have become politically dangerous, but there are signs that Mrs Chattaway is now giving him a precarious base for a more sensible if ambitionless life. The problems really lie with his skinhead son and his inadequate daughter, who might in their different ways direct their anxiety into racialism. And the Singhs, finally, have problems which arise from Baldev's frustrated dream.

It must be said that Dr Sherwood is far from being naive about all this. Those who are sceptical may certainly doubt whether there is much to be gained from explaining Mr James's desire to behave well and not have wild parties, as an equal fear of untidiness and explosive violence, or John Chattaway's Paki-bashing expeditions as being expressive of castration fears. But there is relatively little of this. The main themes relate to the more likely psychological causes such as the disturbance of personal securities through the loss of loved ones. Moreover this last chapter, about how vicious racial spirals may be made benign through close attention not merely to the origins of conflicts but to the circumstances which lead to their resolution through the abuse of racial groups makes very good sense. This is an eminently sensible book which shows the possible contribution of the psychological approach to the study of race relations.

Dr Lambley's book *The Psychology of Apartheid* also claims to be applying psychological and psychoanalytic methods to the study of race, this time in a situation where race relations problems are not simply the product of personal encounters but of a political system based upon racial oppression. He is a young Englishman educated in the Copper Belt and in the University of Capetown, who started out as a sociologist, then became a clinical psychologist working in a series of hospitals and finally operated a private practice as a psychotherapist. The substance of his book relates to what he found out about the working of the system, on the one hand through orthodox psychological testing of a number of racial and ethnic groups, and on the other, through what people from all groups said to him in his clinic.

His thesis is that the Afrikaners who govern South Africa are misunderstood if they are judged in terms of western institutions, or, for that matter, in terms of any rational patterns of action at all. According to Lambley Afrikaner institutions and the Afrikaner mentality were established as a culture pattern among the Trekkers and are part of the South African state today. Afrikaners have always believed in a simple patriarchal order of society in which there is an infantile submission to leadership and an approach to problem-solving based upon seeking to win favours from father figures. Within such a system the children as well as the fathers naturally assume that there are also men destined to be servants.

Lombley's historical researches, so he claims, had him to the view that all previous analyses, including both liberal and Marxist, had misinterpreted the Afrikaner and the South African state by assuming that the South Africans could be understood simply as pursuing rational interests. For him what one has is a system governed by a culture pattern which is an archaic survival from Trekker days. Unfortunately this is all based on a very partial reading of recent South African history. The defect of the liberals is that too many of them share Lombley's attribution of South African life to the Trekker mentality and the case made, not only by Marxists, that the South African system fits nicely the needs of its largely English-speaking capitalists requires more of an answer than this. At the outset, then, we are faced not by a well considered historical perspective but a generalized and highly dogmatic statement of commitment.

What follows is an attempt to show through the use of a whole series of psychological tests that the ethnic mentalities assumed in Lambley's psychohistory are actually present in samples drawn from the different populations. Since the record of these researches is introduced anecdotally rather than systematically as it would be in an academic study, it is difficult to judge their validity. One can only record in broad terms what is actually claimed.

The claim is not that the Afrikaners are in fact mentally disturbed or psychotic, in fact they emerge from these tests as a contented and untroubled people who in this respect actually compare favourably with the English and the Coloureds. Their problem is actually the opposite. They are essentially children and, having created an institutional order which enables them to continue functioning as children, they really have every reason for contentment.

Surprisingly, it is the English who show signs of disturbed. The Capetown students for example, while they support the Progressive Party almost in inverse proportion to its political importance and have the same attitudes which Lombley believes normal non-South African people are likely to have on race questions, show startlingly high levels of anxiety when it comes to putting their principles into practice. They may solve their problems externally by acquiescence, by permitted ineffective political action or by emigration, but above all they are deeply afraid. Were it not for the protection of their institutions moreover that fear would be reciprocated by the Afrikaners for whom these English, rather than the Africans, represents the biggest threat.

The crude classification of subjects into English and Afrikaners is modified only in one or two of the tests when, for instance, English of differing political persuasions are compared. What it can hardly explain, however, is the growing support for the Nationalists among the English-speaking population. Recent political trends hardly suggest that these people are motivated only by fear. They have interests in the system which are now openly threatened by guerillas on the borders; the Afrikaners are allies in defending those interests, not simply tyrants terrifying them into submission.

This notion of the psychological manipulation of a multi-racial population by a government which if totalitarian is still cunning becomes the main theme of Lambley's book. While on the one hand psychiatric treatment for Coloureds (Lemley has less experience of the treatment of Africans) in hospitals is disgraceful, this does not stop the police from using quite sophisticated psychological methods for spying on, dividing and controlling all sections of the population. And, far from effectively resisting this system, the various groups, English, Coloured and African, find ways, not merely of living in it, but living off it.

Since much of the evidence of English and Coloured behaviour is drawn from his own clinical consultations, one might object that the picture given here is drawn from a narrowly selected sample of the psychologically disturbed. It is hard to tell. Evidence is not presented directly from case notes and much of what the patients have to say appears to take the form of political gossip. This interest of the book may perhaps be in this gossip. Having found his research plans blocked in the universities, Lambley had quite deliberately decided to do clandestine research. The claim is that in the protected setting of the clinic, he was getting a true and chilling picture of political reality which would never be publicly expressed.

The book ends with this kind of gossip. In a society managed and culturally directed by the secret Broederbond there is still ordinary political corruption. Getting influence in and using the Broederbond becomes a major preoccupation of politicians. The changes in the Nationalist Party leadership have to do with this. Eventually the Boss found that he had fathered a type fanatic in Verwoerd who actually believed in the ideology which they need to cover up their domination. Verwoerd was able to transform the Bond and, in the process, he brought in the ex-Nazi Vorster and his henchman van der Berg. When Verwoerd fell to an allegedly mad Greek assassin, the gossip of the clinic and outside was that the killing might have been made possible if not actually arranged by Vorster's men. Then finally, Vorster brought in both Mulder and Botha and his regime survived until the efflorescent corruption preceded over by Mulder enabled Botha to take control.

We are, of course, a long way here from a simple psychology of apartheid. But, if what we are looking for is political analysis, this account of the goings on in the Broederbond and the Nationalist Party leaves a lot of questions unanswered. It is, after all, a modern capitalist economy which Botha governs. If there are constraints arising from the mentality of party members and from the system of corruption which White supremacy has produced, there are also others which arise from the economy, and the English-speakers as well as the Broeders within that economy must surely be successful in pressing on the government views other than those of the Bond and the lunatic fringe. If these matters, unfortunately, Lambley remains noively ignorant.

As Rae Sherwood has shown, psychology and psychoanalysis do have their uses in the analysis of race relations problems. It must be hoped that there will be those in South Africa among the academics (incidentally these are far more courageous than Lambley allows) who might apply themselves to developing a more sophisticated analysis.

John Rex

John Rex is director of the SSRC Research Unit in Ethnic Relations at the University of Aston in Birmingham.

The search for a Third World mega-theory

The Third World Reassessed
by Ellykl-Hermassf
University of California Press, £9.00
ISBN 0 520 03764 2

Despite his common usage the temptation always to put the term Third World in inverted commas is hard to resist, given its extremely vague and imprecise nature. At one stage Hermassi, in *The Third World Reassessed*, argues that the term "almost defies conceptual analysis"; at its best it is applied to a wide range of societies which tend to exhibit some common features but which are also widely different in many other ways. Thus it is perhaps not surprising that attempts by social scientists to provide general theories of Third World development have often foundered on the rocks of crude over-generalization.

In the early part of this book Hermassi provides a most useful discussion of the theoretical lacuna of previous attempts at establishing a paradigm for Third World development. To achieve this he identifies four broad types of approach. These he labels liberal, managerial, neo-Marxist and historicist.

The first applies to the modernization school so popular in the 1960s especially in the United States (the reason why this should be described as "liberal" is unclear). Put simply the underlying belief of this approach was that development is a linear path along which all societies travel: the Third World then represents a picture of what the developed world used to look like and the developed world is a model of what the Third World will look like in the future. Having established the point of departure and the point of arrival the essence of scholarship on the Third World was to identify the processes and mechanisms of the journey.

The managerial approach shared many of the same assumptions but placed a greater emphasis on the practicalities of management, problem-solving and policy execution. Hermassi's attitude to both approaches is that they are ethnocentric, logically suspect and for much of the time downright inaccurate when laid alongside the reality of Third World experience.

The neo-Marxist approach which came to the fore in the 1970s shifted the major explanatory focus to the world system in general and international capitalism in particular. Third World development, or lack of development, was essentially to be understood in terms of the dependency relationship existing between the capitalist centre and its periphery in the Third World. Hermassi provides a sensible critique of this approach. He argues that "dependency theorising has neglected the internal dynamics of Third World societies and in particular their political structures and cultural traditions" and that "most dependency writings have relied on a deductive approach to the internal conditions, making them conform to what is logically expected on the basis of exogenous forces".

Hermassi's intellectual sympathies clearly lie with the fourth, historicist approach which is "time-oriented and context-sensitive". However, the problem with such an approach is that, although it undoubtedly leads to a more thorough and convincing analysis of particular societies it virtually eliminates the possibility of some mega-theory of Third World development. This dilemma is neatly illustrated by the three central chapters of the book which deal with North Africa and the Middle East. Here Hermassi's analysis is always sophisticated and persuasive but not conducive to wider generalization. The chapter on Algeria, for example, openly states that "to study Algeria and especially to see it as a whole, is a formidable task for it is a sizable country marked by profound regional, ethnic and linguistic differences". However, if one single country presents such a problem what hope can there be for a single comprehensive framework for analysing the hundred or so countries that make up the Third World? Rather than providing a "reassessment" of the Third World Hermassi seems to be demonstrating the impossibility of such a task.

As a collection of essays on Third World topics this book has a very great deal to recommend it but ultimately it fails to fulfil the claim made by its title. In a sense it only made by its title. In a sense it only not and settles for lesser but more attainable goals.

John Wiseman

Dr Wiseman is lecturer in politics at the University of Newcastle upon Tyne.

BOOKS

Agricultural policy in the US

Farm and Food Policy: Issues of the 1980s
by Don Paarlberg
University of Nebraska Press, £9.00
ISBN 0 8032 3656 5

Don Paarlberg, now an emeritus professor of Purdue University, has had a long and influential career in American agricultural economics. His experience spans teaching and government, and has included spells as special assistant to President Eisenhower, coordinator of Food for Peace, and latter an apparently unhappy stint as assistant secretary of agriculture from 1972 to 1974. His aim in his most recent book is to describe the development of American agriculture, assess its current state and identify those issues of public policy which are likely to be most in evidence during the decade of the 1980s.

Active United States farm and food policy, according to Professor Paarlberg, has fallen into three historical phases. The first, extending from the decade of the Civil War for 60 years up to 1933, was concerned with the initial settlement of new areas as determined by the provisions of the Homestead Act, and with the establishment of an educational, research and extension system, largely through the land grant colleges, which would favour economic improvement.

A second phase was then provoked by the inter-war depression and the acute agricultural distress which it caused. The main planks of policy were price support and commodity programmes associated with the Agricultural Adjustment Act of 1933. Many remnants of this phase still persist, although since the 1960s it has gradually merged into a third era in which government action relevant to agricultural affairs has increasingly been promoted by non-farm interest groups rather than by the established farm lobby. Examples are concern for poverty, which has promoted food programmes motivated by nutritional need rather than being disguised farm support, consumer concern for food safety, concern about apparent exploitation of some groups of poorer farm workers, environmental pressures, energy problems, and the role of the United States in international affairs. The first two phases can be understood by mixing basic agricultural economics with a little macro-economic theory. The third phase, in which agriculture has lost its uniqueness, is much more difficult and in many ways much messier.

The identification of historical phases is very helpful and some of the early analysis in the book is excellent. This is particularly true of the long treatment of the commodity programmes in which the author questions, with devastating effect, the logic underlying large scale farm support. He can see some virtue in intervention using some price supports and carry-over stocks designed to reduce the inevitable uncertainties of agricultural production and trade, and also protect the consumer. However, he notes that commodity programmes, in practice, tend to boost price supports and output targets "above a moderate and benign level" towards sheer protectionism.

The story is a familiar one which can be translated, with only a few amendments to cover technical differences in operation, to the current European scene. The surprising feature is that protectionism has persisted for so long in a country where natural attributes and the basic farm structure inherited from the earlier development phase are at their most favourable. In effect Professor Paarlberg is convinced that inward looking policy resulted in the loss of potential overseas markets for farm products and, on the other side, unjustified restriction of imports of sugar, dairy products and some meats.

In view of his pedigree, it is not surprising that the undertones in the discussion of commodity policy obviously stem from free market economics and the principles of comparative advantage. However, the tone is notably moderate rather than fiercely doctrinaire. A similar emphasis then persists through much of the remainder of the book. For example, Paarlberg is not impressed by domestic food assistance programmes, preferring the allocation of support in direct cash grants to poorer families; he is keen on market-based allocation systems for water use in arid zones; and on the important issue of environmental protection he points out forcibly that there are substantial hidden costs of regulatory control and that the search for "less than perfect solutions" may be economically justified.

There are also interesting chapters on food aid and technical assistance in which Paarlberg sets out the issues fairly and in some detail. He makes it clear that he is opposed to Third World development on Marxist lines, but he is equally insistent in advocating help, arguing that development is a "positive sum game" in which there are long-term gains for recipient and donor nations.

Unfortunately, although the book is attractive in terms of clarity of insight and a philosophical stance which has sensible middle of the road appeal, it does have irritating features. In his efforts to hammer home the thesis that agriculture is increasingly subject to external pressures Paarlberg includes a number of tedious "chapters" which are little more than padding (five and a half pages on reshaping the Department of Agriculture, less on occupational health) but then inexplicably, given their importance, he fights shy of serious discussion of marketing and "agribusiness".

Many readers will also feel repelled by a style punctuated by disconcertingly frequent mixing of tiresome imagery. To exaggerate the point, albeit marginally, a collection of phrases can be put together to give a "sentence" which tells us that "the farm policy watershed determines which way the streams will flow into uncharted territory, where we will have exciting adventures stitching together the patchwork quilt and putting points on the scoreboard, and where hopefully the motives will be friendly". Serious students of agricultural affairs have much to learn from Paarlberg though it is regrettable that such disfigurement of language has to be tolerated in what could be a stimulating book.

G. H. Peters

G. H. Peters is Director of the Institute of Agricultural Economics at the University of Oxford.

An intricate network of theory

Gauge Fields: an introduction to quantum theory
by L.D. Faddeev and A. A. Slavnov
Benjamin/Cummings, £15.70
ISBN 0 8053 9016 2

Quantum Field Theory
by Claude Itzykson and Jean-Bernard Zuber
McGraw-Hill, £23.15
ISBN 0 7 032071 3

Quantum field theory applies quantum theory to fields (like the electric and magnetic fields) in the same sort of way that quantum mechanics applies quantum theory to particles. For example, Heisenberg's uncertainty principle limits the simultaneous measurement of magnetic and electric field strength at a point somewhat in the same way as it limits the simultaneous measurement of the position and momentum of a particle. Quantum field theory is the proper way to express the wave-particle duality of photons, and, it turns out, of other particles too. In fact, it is not much of an exaggeration to say that special relativity and quantum theory together lead inevitably to quantum field theory; and that this is the best framework known within which to study the physics of elementary particles.

Quantum field theory has proved capable of making amazingly accurate predictions about the properties and interactions of photons, electrons and positrons. For many years, people have tried to use quantum field theory to treat also the strong interactions (including nuclear forces) of hadrons and the weak processes (including beta decay) involving leptons and hadrons; the difficulty has been that the forces were not known in any detail. It was like trying to do atomic physics knowing the principle of quantum mechanics but not knowing the law of force between electric charges.

During the 1970s, many people have become convinced that we now know, for the first time, the sort of field theory that nature uses. These are the so-called gauge-field theories. In quantum theory, the phase of an electrically charged field may be changed at any point of space-time, with no observable consequence. This property is called gauge-invariance. Gauge theories generalize this idea by replacing the change of phase by a more general local transformation of a more complicated field. This principle guided the construction of the Glashow-Salam-Weinberg unified theory of weak and electromagnetic processes—a theory which has thus far passed all experimental tests to which it has been put. A related theory (called, rather bewilderingly, quantum-chromodynamics) of strong interactions possesses many appealing features.

Gauge fields have been much studied during the past decade, and a body of beautiful, but subtle and difficult, theory has grown up. These are the first textbooks to treat these new subjects systematically. They are each written by eminent authorities, and are to be greatly welcomed.

Gauge Fields is a translation of a book, published in Russian in 1978. It specializes to the new material, and would be excellent taken as a sequel to one of the older texts on quantum field theory. It books on quantum field principles of is mainly about the principles of gauge field theory, with only a short chapter on applications.

Quantum Field Theory, written in most readable English by its French authors, is a different story. It offers a complete coverage of the whole subject of quantum field theory. The newer material occupies less than a quarter of the book, but the older parts are treated with all the advantages and economy of powerful modern techniques. It is masterly. I do not see how any serious student of the subject can be without it. With 700 pages, it is excellent value for money.

Scattered throughout the book are suggestions for problems which able and energetic readers can attempt. A good number of simple calculations are described in detail, including, for example, the calculation, to two-loop order, of the vacuum polarization function in electrodynamics. About the only thing the book does not attempt is to give details of the present state of experimental verification of the gauge theories, or to describe the future prospects for the discovery of the predicted gauge particles. The authors believe, probably rightly, that such an account would quickly become out of date.

Both books are very clear, but anyone intending to read them should be warned that the subject is difficult. The student must understand an intricate network of theory before he or she is in a position to calculate observable quantities. Perhaps this is inevitable. Perhaps it shows that we have not yet properly assimilated the subject.

J. C. Taylor

J. C. Taylor is a professor in the department of applied mathematics and theoretical physics at the University of Cambridge.

Unconventional arithmetic

Ontological Economy: substitutional quantification and mathematics
by Dale Gottlieb
Oxford University Press: Clarendon Press, £10.00
ISBN 0 19 824420 7

This book contains a formal theory of arithmetic which is based on substitutional quantification, and which purports to be ontologically neutral in the sense that it does not require us to posit "abstract entities" as its subject matter. In this it contrasts with the conventional axiomatic treatment of number theory—or, at least, so the author would have us believe. In fact, the theory has no advantage over the conventional one in point of ontological economy, and is decidedly inferior in point of formal simplicity. The author's belief in the superior merits of his theory stems, at least in part, from his apparent failure to understand the conventional, axiomatic approach.

When we treat arithmetic or real number theory axiomatically, we are in no way committed to the existence of "natural numbers" or "real numbers". In laying down axioms for these theories we define what it is for a structure to be a "simply infinite system" (using the Dedekind-Peano axioms for arithmetic) or a "complete ordered field" (using Dedekind's axioms for real number theory). Whether structures which satisfy these axioms exist is a separate question. The reason why such an axiomatic definition of a whole class of structures (simply infinite systems, complete ordered fields) can be construed as, in some sense, a "definition" of particular abstract mathematical objects (natural numbers, real numbers) is that the class defined in this way can be shown to consist of mutually isomorphic, and, therefore, mathematically indistinguishable, structures.

There is no question, however, of singling out particular structures as the "natural numbers" or "real numbers". On the contrary, from the modern axiomatic standpoint "natural numbers" and "real numbers" are just abstractions—fictions, if you will—and the realities from which they are abstracted are the structures which satisfy the appropriate axioms. Of course, if no structures satisfy a system of axioms, then the corresponding theory collapses into triviality. In this sense, then, the conventional treatment of arithmetic does indeed carry an ontological commitment, a commitment to the existence of models of the Dedekind-Peano axioms. But it is not necessary to postulate "natural numbers", whatever they might be, since any infinite set gives rise to infinitely many such models. The commitment, in short, is to the existence of infinite sets.

Thus the author's claim that the conventional approach to number theory commits us to "natural numbers" is false. But that approach does, undeniably, commit us to sets. Does the author's own system commit us to less? He clearly thinks so. He devotes the first five chapters of his book to developing a technical definition of the ontological commitment of a formal theory. He claims that according to this technical definition his formal theory of arithmetic is not ontologically committed to abstract entities. I do not doubt that his claim is entirely justified. But this simply proves that his definition of ontological commitment is worthless. For it is quite clear that his theory commits us to a great many, indeed, infinitely many abstract objects, namely, the sentences and terms of his formal theory. The author anticipates this objection, and tries to meet it: "Sentences will require expression types as its abstracts; these may be construed as the shapes (visual, auditory, etc) of tokens. Thus they are properties instantiated directly by objects, only one step removed from the concrete" (page 109).

Now, of course, it is quite true that some expression types are "only one step removed from the concrete". But if current physical theory is to be believed, we live in a finite universe, and, consequently, all but an infinitesimal fraction of expression types must fail to be the types of actual, or even of possible, tokens. We must, it seems, posit shapes of expressions which cannot actually exist—there's real ontological economy for you. Of course, the author could avoid this difficulty if he were to take expressions to be finite sequences of primitive signs, but I suspect that he would hesitate to do so, since that would force him to recognize sets. However, it seems likely, in any case, that sets, functions, and so on, will have to be used in order to develop the semantical theory required. And, of course, once you have an infinite set, you have models for the conventional Dedekind-Peano axioms.

The author urges upon us the advantages of a purely logical account of arithmetic, which he imagines his theory to be. But his free-wheeling and uneliminable use of recursive definitions makes this claim dubious.

It is conceivable that the formal theory of arithmetic presented here may be of technical interest. I cannot see, however, that it has any significance for the philosophy, or the foundations, of mathematics.

John Mayberry

John Mayberry is lecturer in mathematics, at the University of Bristol.

Academic Book Club

English Literature people—have you joined yet?

The first list is ready now. Here's a selection from more than 190 titles . . .

Author and Title	*Published Price*	*Book Club Price*
ANDREWS, M. Dickens on England & the English	£12.50	£4.95
BELY, A. Petersburg: A Novel	£8.50	£4.95
DELANY, P. D. H. Lawrence's Nightmare: The Writer & His Circle in the Years of the Great War	£15.50	£7.95
EDWARDS, P. D. Anthony Trollope: His Art & Scope	£15.95	£5.95
EVERETT, K. Coleridge's Secret Ministry: The Context of the Conversation Poems, 1795-1798	£18.50	£5.95
GISSING, G. Denzil Quarrier	£9.50	£4.95
KORG, J. Language in Modern Literature: Innovation & Experiment	£16.50	£8.95

To: The Academic Book Club, 15 Ship Street, Brighton, Sussex.

● Please tell me how to join the Academic Book Club, and send me your first list.

NAME (Block Capitals please)

ADDRESS

THES

BOOKS

The marvel of reproduction

Essential Reproduction
by Martin H. Johnson and Barry J. Everitt
Blackwell Scientific, £8.50
ISBN 0 632 00527 0

Human population explosions are second only to nuclear explosions in their dreadful consequences. Books which clearly describe, analyse and synthesize the present state of knowledge of mammalian (including human) reproduction, and draw attention to the clinical problems upon which basic experimental studies impinge, are therefore of considerable importance.

This excellent addition by Johnson and Everitt to the library of books on reproduction succeeds in these various objectives. The authors say in the preface that the "... book represents an integrated approach to the study of reproduction", and they are certainly correct. There is frequent reference forward and back to other sections. It is aimed at medical, veterinary and science students, which presumably includes zoologists, physiologists, even biochemists, besides (as applied biologists) those studying agricultural science. But their teachers and those doing research would without doubt also benefit both from its details and from the perspective which it provides.

The book comprises 12 chapters, starting with the interaction of genetic and humoral factors in the determination of phenotypic sex, continuing through gametogenesis and the regulation of gonadal function by the hypothalamo-hypophysial system, which leads reasonably not only to a discussion of puberty but of the climacteric. There is then a short chapter dealing with the peripheral actions of steroid hormones in adults, followed by the concluding five chapters which consider sexual behaviour, fertilization, pregnancy, parturition, lactation and maternal behaviour.

No chapter is less than very good, and I found the first four outstanding; in these there is a freshness of approach combined (as elsewhere) with a simplicity of style, which makes, for example, the obscurities of the regulation of spermatogenesis disappear. We are treated in many places to the awesome details of reproduction. Thus the continuous availability in a sexually mature mammal of spermatozoa is an astounding feat of coordination, differentiation and sustained activity; the yield is staggering, and can be as much as 300 to 600 spermatozoa per gram of testis tissue per second. Yet of this prodigious production much fewer than one in a million spermatozoa ever complete the journey to the egg. There is also in the first four chapters, and in other parts of the book, clear sensitive, discussion of derangements in human sexual differentiation and development, with the psychological consequences of incorrect diagnosis of sex in early life leading to problems of gender identity.

Included within these parts of the book concerned with these defects is a most interesting account of the "Guevodoces" found first in the Dominican Republic: genetically male children who at birth are classed as female because of poorly developed external genitalia, and are reared (though somewhat ambiguously) as females. This is simply because they lack an enzyme which, during foetal life, plays a crucial role in the conversion of a male sex hormone in the foetus from a less to a more active form. Fortunately, by about the age of 12 their testes begin to function normally, and the pubertal onset of increased male sex hormone production allows the Guevodoces to develop sexually thereafter in a fairly normal fashion. Unlike people enduring other abnormalities of sexual differentiation, they are able to switch their psychosexual identity to that of males. There are other places where the authors point carefully to the clinical significance of experimental results although they are anxious to avoid easy extrapolation from rat, sheep or rhesus monkey to ourselves.

The book is written in a clear, straightforward manner, with the text uncluttered by references. Each chapter concludes with a short bibliography and at the end of the book there is a key to the sources of those figures which have been derived from the work of others. The layout of the book is pleasing, and the numerous line illustrations and tables are particularly informative and clear, helped by legends which provide instructive details of experimental technique and results.

There are a few incautious statements. For instance the authors write that whereas in women there is the climacteric, men "... retain their fertility throughout life". Analogies can be helpful and even amusing, so that in discussing the role of suckling in the promotion of further secretion of milk, it is effective to remark that "... the baby actually orders its next meal during its current meal". That is succinct. But on the other hand the summary of the chapter dealing with fertilization is too laboured and far fetched: 17 lines devoted to a journey from Edinburgh to Paris and supposedly analogous to the passage of sperm to the site of fertilization.

Paraphrasing a remark attributed to Warden Spooner, some of the books published today may in fact be filling much needed gaps in the literature. This is certainly true of *Essential Reproduction*. Through their lively, original style, the quite detailed examination of specific experimental studies, the excellent figures and clear layout of their book, the authors have conveyed the ideas within the important general problems of reproductive biology, yet have made us appreciate "... the dangers of wholesale extrapolation between species." We are left to marvel at the fact that for the most part "... the startlingly precarious journey through fetal life, childhood, puberty and adolescence, somehow leaves most of us with an unambiguous gender identity", resulting among other things in the continuation (for the moment) of the species.

John Clarke

John Clarke is lecturer in animal physiology in the department of agricultural and forest Sciences at the University of Oxford.

Kachina doll of painted wood and horsehair (about 1915), representing Pa-tikang-hoya, one of the twin war gods of the Hopi tribe of pueblo Indians of south-western North America, along the banks of the Colorado River. Taken from Native Arts of North America by Christian F. Feest, published by Thames and Hudson at £5.95 and £2.95.

American philanthropy and the Chinese scientific elite

American Science and Modern China, 1876-1936
by Peter Buck
Cambridge University Press, £15.00
ISBN 0 521 22744 5

The problems of the transmission of science to the underdeveloped countries are usually assumed to arise from the social and cultural context of the recipient country. This book is exceptional, and important, because its main theme is the opposite: the problems of the context of the donor country. Its subject is what is revealed about American ideas of science and its social and political role as expressed—and even to some extent defined—in the choices made by American philanthropic foundations, on the advice of American scientists, in the deployment of funds for the transmission of science to China.

According to the author the scientific profession in the United States went through three phases. The nineteenth-century American scientist usually came from a small-town background, was strongly individualist and emphasized the value of science as a body of universal law (rather than science as laboratory technique) which, if accepted, would dictate a rational society. In the second phase, American scientists were more associated with the large cities and were very conscious of the problems of rapid industrialization and urbanization; they therefore saw science as having an immediate social role—to put the force of reason behind collective social action. In this role, scientists would act as a kind of voluntary association. In the third phase, although many scientists continued to believe that they operated as members of an autonomous profession, in actual fact most of them had been drawn into the industrial and bureaucratic systems, and could exercise no independent role.

The author finds that the American view of the transmission of science to China followed a parallel course. The medical missionary who first represented American philanthropy in China saw China's problems as grass-roots rural problems to be solved only by a science-based cultural revolution. The philanthropic foundations saw America's social problems reflected in China—the strains of rapid industrialization unaccompanied by a rational social response. The next generation, now highly professionalized, simply emphasized China's need to create a cadre of research technicians. In the end, therefore, all that the Americans proved willing to pay for was the training of a small scientific elite, who found themselves isolated in their own society.

In the elaboration of this thesis, Dr Buck has produced interesting material on the origin and nature of the scientific establishments on both sides of the Pacific. Unfortunately for the author, but fortunately for his readers, this very material is itself sufficient to refute his own thesis and provide this basis for a better one.

First, Dr Buck nowhere meets the argument that the attitudes of both Americans and Chinese were influenced—almost determined—by their changing expectations of the effectiveness of successive Chinese governments. In this respect, the most significant change was from despair—during the warlord period—to any effective government at all, to the near-euphoric hope that the new Nationalist government would usher in an era of radical social change, of rapid economic growth and of ordered democratic life. Thus, with the approval of the American foundations which supported them, the young members of the Chinese Science Society first concentrated their efforts on the popularization of scientific method. Then, with the establishment of the new Nationalist government, they transferred the emphasis to the familiar combination of university teaching and laboratory research, on the assumption that the new government would provide the channels through which they might serve China by doing what they had been trained to do best. Only the wisdom of hindsight shows that their hopes were false.

A closer look at what those young Chinese learned in America yields a conclusion almost opposite to that of the author. The university mainly concerned was Cornell. It had been founded to give priority to science and technology, and to provide education for all. One of its most influential figures was the Dean of Agriculture, Liberty Bailey.

Bailey insisted on the integration of pure laboratory science with practical service to agriculture, and took the conditions of the depressed farmers of New York State as the data on which his laboratories worked. He combined the virtues of traditional grass-roots concern with the new autonomous academic science. Thus at Cornell the future leaders of China's scientific establishments got the best of both worlds. If, as the author says, they did not concern themselves with American controversies over the role of science, it was perhaps because Liberty Bailey had so reasonably reconciled them.

The ethos of American science in the early twentieth century had been most articulately expressed by Eliot of Harvard. Eliot believed that the social and environmental problems posed by industrialization could be solved only by collective action; that at the same time science, on which industrial growth was based, could at least alleviate poverty; that scientific rationality had made it possible for the first time in history for society organized through the democratic state to lay down the lines of rational development; and that the profession of science would be the greatest of voluntary associations, help to determine this future. It comes as no surprise to find that Eliot had studied in Hegelian circles in Germany.

At about the same time, young Mao Zedong was responding warmly to his Chinese teacher of philosophy, who at the University of Edinburgh had imbibed a blend of Oxford neo-Hegelianism and Presbyterian pragmatism so near to the philosophy of Eliot as to make no difference; and Mao found it so far from irrelevant to Chloe that he built it into his sinification of Marxism.

Dr Buck has investigated the origins of these first Chinese scientists. He shows that they came mainly from a few counties around the Yangtse delta, counties distinguished by a number of related characteristics: they were areas of traditional commerce and industry; they were centres of high Confucian scholarship; and in the twentieth century they were distinguished by the vigour of their voluntary associations, and at the same time by their resistance to Christian conversion. What he fails to see, however, is a further characteristic of this area, which disposes of his argument that this cadre of future scientists came from a small group already half-alienated from their own society. The area was the home of the Jiangsu school of Confucianism, whose members believed that the pursuit of truth was futile and frivolous unless its purpose was practical improvement, and that only the objective truth could resist such improvement. They were also the only school in late-Imperial China to take an interest in technological innovation. In the twentieth century these ideas were rekindled in the Yangtse Valley by ideas from abroad, and passed into the new national ethic.

The isolation and the alienation of Chinese scientists before 1949 was in fact the result neither of their American training nor of their own origins. On the contrary, what they learned in America, confirming as it did the value of their own Jingshi education, a concept of the role of science which could scarcely have been more socially relevant. The simple facts are that at that time China could give them no job except academic jobs, that they were overwhelmed with elementary teaching, that neither Chinese government nor Chinese industry at that time could use their training in any meaningful tasks, and that the Chinese peasantry, in whose service they might have found a fulfilling mission, were too vast in numbers for their handful of men to begin to cope with their needs.

Dr Buck's final message, somewhat obliquely delivered—is that China's scientists should have joined the Communist Revolution. In fact, most of them did, and without doubt have found a less frustrating role. Yet their problems are not over. The Chinese Communist government for 20 years could not make up its mind how to use them.

The Gang of Four then dashed the value of their work across them of serving an elite, destroyed their autonomy as they tried to sense them down to the villages to labour. Their successors have sought to restore the balance, and now take a view of science and of the profession of science which is not too incompatible with the ethos of Cornell. But they have yet to solve the dilemma of how best to serve a poor country to deploy their scarce resources of scientific manpower, and of how to relate specialist scientific advice to political leadership. The choices that faced the Rockefeller Foundation still face the Peking government today. Revolution has not resolved them as Dr Buck's thesis implies that it would. Under Deng Xiaoping there is more hope of a solution than there was; but time cannot yet be said.

Jack Gray

Jack Gray is research fellow in the Institute of Development Studies at the University of Sussex.

NOTICE BOARD

Noticeboard is compiled by Patricia Santinelli and Mila Goldie

Chairs

Delphine M. V. Parrott has been appointed to the Gardiner chair of bacteriology in the University of Glasgow with effect from December 1, 1980. Dr Parrott is at present chief professor and acting head of the university's department of bacteriology and immunology at the Western Infirmary.

Sir Tom Cannon, Director of the Export Centre, University of Durham Business School, has been appointed to the new chair in business studies at the University of Stirling. He will take office in March 1981.

Dr Geoffrey Brown, at present senior lecturer in educational psychology at the University of Lancaster, has been appointed to the chair in education at the University of East Anglia.

Dr Howard Temperley, at present reader in the School of English and American Studies at the University of East Anglia, has been appointed to the chair in American studies at the same university.

The University of East Anglia has announced two appointments to personal chairs: Dr A. R. Forrest, at present reader in the School of Computing Studies and Accountancy, has been appointed to a personal chair in computing studies and Mr J. M. Holley, senior lecturer in the School of Economic and Social Studies, has been appointed to a personal chair in philosophy.

Mr J. K. Hiffe, a senior research consultant with International Computers and visiting professor at Queen Mary College, University of London, has been appointed to the new chair of information systems science and technology at the college.

The University of Birmingham has announced the following appointments: The personal title of professor of physiochemistry has been conferred upon Dr J. P. Simons from October 1, 1980. Dr Simons has been reader in physiochemistry in the department of chemistry.

The title of Emeritus Professor has been conferred upon Charlotte M. Anderson, who was Leonard Parsons professor and head of the department of paediatrics and child health.

The title of professor of English literature has been conferred on Dr Ian Reid, reader in the department of English.

The title of Emeritus Professor has been conferred on Dr R. K. McKee, professor of mycology and plant pathology at Queen's University, Belfast, from 1966 to 1980.

Philip Butler Wilsenig, reader at the University of Durham has been appointed to the chair in French at the same university.

The title of emeritus professor at the University of Durham has been conferred upon Professor C. R. B. Crannis who retired as professor of zoology in September 1980.

Paul Roger Whiting, at present senior lecturer in social administration, University College, Cardiff, has been appointed to the chair in social administration at the University of Manchester. The chair was previously held by the late Professor A. G. Rose.

Dr Noel Hampshire, reader at the Loughborough University of Technology, has been appointed to a personal chair in applied electrochemistry, in the department of chemistry at the same institution.

Dr M. A. Crawford has been appointed to special professorship in the department of human nutrition, School of Agriculture at the University of Nottingham.

Dr P. A. Watson, reader in telecommunications at the University of Bradford, has been appointed to the first personal chair in communication engineering at the same university.

Overseas

Dr Christopher Bagley, reader in sociology at the University of Surrey, has been appointed to the Senator Patrick Reid Chair of Child Welfare at the University of Calgary, Alberta, Canada.

Island in the Attersee, one of the paintings on view in the Gustav Klimt and Egon Schiele exhibition at the Galerie St Etienne, New York, until December 27. Oils, watercolours and drawings from 26 museums and private collections across America have been assembled for the exhibition.

Honorary degrees

Birmingham

The following are to be awarded honorary degrees in July:

LLD: Mr James Callaghan MP, former prime minister; Sir Arthur Armitage, recently retired vice-chancellor of the University of Manchester; Professor M. Gelfand, retired head of the department of medicine, University of Rhodesia; Sir David Perrin, chairman of the West Midlands Regional Health Authority and secretary of Birmingham Trades Council.

D Litt: Mr D. L. A. Parr, former keeper of the Birmingham Museums and Art Gallery.

DSc: Mr A. W. Forster, chairman and chief executive of Esso Petroleum and a Birmingham graduate.

DSocSci: Professor F. H. Hahn, the Cambridge economist.

City

The following have been awarded honorary degrees:

LL: Sir Ronald Gardner Thorpe, Lord Mayor of London on his installation as chancellor of the university, Lord Scarman, Lord of Appeal in Ordinary, Sir Michael Walker, chairman of the Commonwealth Scholarship Commission.

Honours for Lord Scarman and Mr Callaghan

LHD: Sir Robert Birley, ex-headmaster of Eton and former head of the Social Science department and at present Gresham professor at the university.

DSc: Dr Wolfgang Biermann, head of Carl Zeiss Jena; Sir John Mason, director general of the Meteorological Office; Professor P. A. Sanguinetti, Nobel prizewinner in economic science.

Recent publications

Directory of First Degree and Diploma of Higher Education Courses 1980-81 is a preliminary guide published by the Council for National Academic Awards for use by applicants seeking information on the availability of undergraduate and sub-degree level courses leading to CNAA awards, offered by institutions outside the universities. It provides the essential information needed to direct applicants to the correct source for detailed information that is the polytechnics and colleges. (Available from the CNAA, 344 to 354 Grays Inn Road, London WC1.)

Resource Based Learning: An experience in Planning and Production by Ray McAleese and John Scobbie of the University of Aberdeen is the final report of a production which began at the university some two years ago which attempted to produce learning materials and throw light on the planning of audio-visual based instruction. The majority of the work was funded by the Nuffield Foundation under its small grants scheme and the report examines the nature of course teams and undertakes an evaluation of text-tape programmes which were produced. (Available from Aberdeen University Teaching Centre, Aberdeen AB9 2UB, £2.50.)

Forthcoming events

The Department of Mechanical Engineering at Sheffield University is holding several courses on different aspects of engineering: Power Studies is a four day course being run from December 11 to 14. Fee: £140. Creep of Engineering Materials is a five-day course from December 15 to 19. Fee: £160. Plastic elements for Mechanical Engineering Design is a one week course from February 16 to 20. Fee: £190. Applications and inquiries to Dr K. Kohler, director for engineering and design courses, department of mechanical engineering, Sheffield University, Mappin Street, Sheffield.

* * *

A short course on rural land management is being run by the department of external studies at Oxford University in association with Oxford Polytechnic's faculty of architecture, planning and estates management from January 28 to 30, at Rewley House, 1 Wellington Square, Oxford. Residential fee: £50; non-residential: £44.50. Further details from Carolin Tidbury, secretary for short courses, Oxford Polytechnic, Headington, Oxford.

* * *

The University of London's department of extra-mural studies in association with Birkbeck College is running a course on Seven Victorian Novels on Monday evenings from 6.15 pm to 7.45 beginning on January 26 until March 9. For the first talk Mr Michael Slater, senior lecturer in English at Birkbeck College, will discuss Charlotte Brontë's *Jane Eyre*. Fee: £5. Tickets for single lectures £1 each. Inquiries to the Special Courses Section, Department of extra-mural studies, 26 Russell Square, London, WC1.

* * *

The Maritime Librarians Association's annual conference is to be held in the town conference hall of Newcastle-upon-Tyne Polytechnic from January 7-9. Topics include "Shipbuilding Technology in the 1980s" and "The Publishing Business". There will be visits to Swan Hunter Shipbuilders Ltd and the British Ship Research Association. Further information from Pauline Richards, Library Information Officer, Secretary of the MLA, DWIST, King Edward VII Avenue, Cardiff CF1 3NU.

Appointments

General

Royal College of Surgeons of England announces the election of Sir Healey Atkins as chairman of the Board of trustees of the Hunterian Collection, in succession to the late Lord Brock; and Sir Reginald Murley, past president of the college as a member of the board.

The following have been appointed members of the Advisory Council for Adult and Continuing Education: Mr P. Bosworth, president, Institute of Training and Development; Dr T. Burlin, senior pro-rector, Polytechnic of Central London; Dr J. S. Gundara, coordinator, Centre for Multi-Cultural Education, London University Institute of Education; Mr P. Holmes, Assistant director, Bristol Polytechnic and head of SW Regional Management Centre; O. Lewis, Librarian, Sheffield City Polytechnic. Two new members to the Social Science Research Council are Professor E. A. Gellner and Mrs Mary Warnock. Professor Gellner was appointed professor of philosophy at the LSE in 1962, and specializes in philosophy and politics. Mrs Mary Warnock has been senior research fellow, St Hugh's College, Oxford since 1976.

Thomas William Bradley deputy chief education officer has been appointed to the post of chief education officer to the Staffordshire County Council. Mr Bradley will take up his appointment with effect from the date of the retirement of Mr Albert Riley.

Mr William Leggat Smith has been appointed a member of the Revising Committee on Export of Works of Art from December 1, 1980. Mr Leggat Smith is chairman of the governors of Glasgow School of Art, chairman of the board of governors Glasgow Academy and senior partner of the Glasgow law firm of Carruthers, Gammill and McKillop.

Sir Andrew Huxley, Royal Society research professor at University College in the University of London, was elected president in succession to the Rt Hon the Lord Todd.

Dr Malcolm Skilbeck, director of the Australian Curriculum Development Centre in Canberra, has been awarded a professorship at the University of London's Institute of Education but will spend most of his time working for the Schools Council as director of studies. He will lead and coordinate the work of the council's research team, especially work related to curriculum development within schools. Mr Gerald James Mortimer has been elected the vice-chairman-elect of Council of Engineering Institutions. He joined the London management staff of Consolidated Gold Fields in 1955 and was subsequently appointed an executive director, deputy chairman and group chief executive in 1976. He became a consultant and non-executive director in 1977.

Universities

Belfast, The Queens

Lecturers: W. G. Bustard (computer science); G. V. Clow (library and information studies); J. M. Dunkley Kromer (psychology); Hugh McAllister Taggart (pathology); S. J. Hawkins (neurology); Gerd Baumann (ethnomusicology).

Birmingham, Aston

Lecturers: K. A. O'Donnell (chemical engineering); C. G. Beaumont (management centre); V. Fomenko, H. P. Gehole, P. Morris, S. Takiguchi, Dr A. H. Urquhart, H. P. Wagner (modern languages); A. R. Horton (political and economic studies group). Visiting lecturers: Dr M. H. Lloyd (chemistry); Professor Max Hatherly (metallurgy and materials engineering). Temporary lecturer: R. A. P. Harris (management centre); Director: Dr A. J. Cochran. Senior contract research fellows: Dr G. E. Embrey (applied psychology); Dr A. F. Gaines (chemistry); A. R. George (production technology and production management). Contract research fellows: Dr A. A. Aziz, E. M. P. Patrick and A. Sahoo (chemistry); J. R. Buchman (chemical engineering); G. Mollison (geological sciences); P. S. Bate (metallurgy and materials engineering); Mr S. H. Wright (ophthalmic optics); Dr J. R. Ocasant, J. Flick, Dr P. Hoch and R. A. Williams (technology policy unit). Research fellow: C. Gould (chemical engineering). Contract research assistant: R. C. Holmes (joint unit for research on the urban environment); J. A. Allnutt (mathematics); C. A. Upton (modern languages); E. A. Biles and Miss H. M. Whitby (pharmacy). Head of the Management Centre: John Chesebrough.

Essex

Senior lecturer: J. M. Nash (art). Lecturers: A. D. Smith (philosophy); M. J. Colley, M. R. Raskovsky (computer science); P. E. Jones (electrical engineering science). Temporary lecturers: G. S. Pillinger, Dr G. R. West (language and linguistics); F. Point (economics); F. Robertson, L. A. Spacek, J. S. Wheal (computer science); G. M. Maxwell (electrical engineering science). Fellows: Dr C. D'Silva, Miss B. L. Jones (chemistry); Miss J. M. Kelly, Dr N. Lewis (biology).

Oxford

O'Donnell lecturer in Celtic studies: P. P. Sims-Williams.

Polytechnics

Leeds

Lecturer: Dr Barry Strickland-Hodge (information control in the School of Librarianship).

Fellowships

Queen Mary College, London

The following have been awarded honorary fellowships: Mr Geoffrey Orgill, general secretary of NALGO, Lord Luke of Pavenham, chairman of the Governors of the College and Mr earnest Shine. The fellowship of the college has been conferred on Emeritus Professor F. R. Crane, who retired as professor of law and head of the department in 1978.

* * *

Applications for the Foulkes Foundation fellowships for 1981 are now being invited. The foundation is a registered charity established in 1975 which aims to further medical research. The fellowship scheme is designed to provide financial support for recently qualified science graduates with research experience who want to take a science degree. In both cases the graduates must intend to do medical research after qualification. So far 47 fellowships have been awarded. For further information contact the Administrative Assistant, Foulkes Foundation Fellowship Scheme, the CIBA Foundation, 41 Portland Place, London W1, enclosing a stamped addressed envelope. Closing date for applications, March 31 1981.

Academic Book Club

Historians—have you joined yet?

The first list is ready now. Here's a selection from more than 100 titles . . .

Author and Title	Published Price	Book Club Price
CHESNEAUX, J. The People's Republic of China, 1949-1976	£12.50	£4.95
FOSTER, R.F. Charles Stewart Parnell: The Man & His Family	£15.50	£6.95
ITZKOWITZ, D. C. Peculiar Privilege: A Social History of English Fox-Hunting, 1753-1885	£15.50	£4.95
MARSH, P. T. The Discipline of Popular Government	£24.00	£9.95
MULLER, W. D. The Kept Man? The First Century of Trade Union Representation in the British House of Commons	£20.00	£4.50
PIMLOTT, J. A. R. The Englishman's Christmas	£7.50	£5.25
VINCENT, J. R. (ed.) Disraeli, Derby & the Conservative Party, The Political Journals of Lord Stanley, 1849-1869	£25.00	£8.95
WEISSER, M. R. Crime & Punishment in Early Modern Europe	£12.50	£8.25

To: The Academic Book Club, 16 Ship Street, Brighton, Sussex.
● Please tell me how to join the Academic Book Club, and send me your first list.

NAME (Block capitals please)

ADDRESS

THES

Classified Advertisements

To place your advertisements write to :

The Advertisement Manager, The Times Higher Education Supplement, P.O. Box 7, New Printing House Square, Gray's Inn Road, London WC1X 8EZ.
Tel. 01-837 1234.

Index

Fellowships and Studentships
Appointments vacant :
Universities
Polytechnics
Technical Colleges
Colleges and Institutes of Technology
Colleges with Teacher Education
Colleges of Further Education
Colleges and Institutes of Higher Education
Colleges and Departments of Art
Research Posts
Administration
Overseas
Adult Education
Librarians
General Vacancies
Official Appointments
Appointments wanted :
Other Classifications :
Awards
Exhibitions
Personal
Courses
Conferences and Seminars
Holidays and Accommodation

Rates :

Classified Display—£7.25 pscc
Minimum size : 9cm × 1 col @ £65.25
Classified Linage—£1.40 per line
Minimum 3 lines—@ £4.20
Box number—£2.00

Copy deadlines :

Classified Display :
Friday in the week prior to publication
Classified Linage :
Monday 10.00 am in the week of publication

Universities

THE CHINESE UNIVERSITY of HONG KONG

Applications are invited for the following academic posts tenable from August, 1981:—

1. Lecturer in English—To participate in teaching, research and the preparation and evaluation of instructional material for undergraduate English proficiency courses. Applicants should have post-graduate qualification and preferably experience in the teaching of English as a Second or Foreign Language at tertiary level. Experience in relevant curriculum or instructional materials preparation also preferred.
2. Senior Lecturer/Lecturer in Government & Public Administration—To teach courses in Fundamentals of Law, Constitutional Law, Administrative Law, and Legal Development in China. Applicants should have a higher degree, (preferably Ph.D. or J.S.D.), with appropriate University teaching and/or research experience. Proficiency in both Chinese and English will be an advantage.
3. Senior Lecturer/Lecturer in Journalism and Communication—To teach Journalism & Communication. Applicants should have a relevant higher degree (preferably a Ph.D.) and have strong interest in any of the following fields: Reporting, Advertising, Public Relations, Photo-journalism, Business Journalism and Graphic Communication. Proficiency in both Chinese and English will be an advantage.
4. Lecturer in Social Work (2 posts)—To teach courses in either Rehabilitation, the Elderly and Social Work Methods; or Social Policy, Research and/or Social Work Methods, and to assist in field instruction. Applicants should have a higher degree (preferably a Ph.D.) with appropriate university teaching and/or research experience.

Annual salary :

Senior Lecturer :	HK$ 148,800 — 199,920 by 8 Increments
Lecturer :	HK$ 95,700—108,660 by 2 Increments BAR. 110,140—160,080 by 7 Increments.

(Starting salary and the grade to be offered will depend on qualifications & experience. Exchange rate: £1=HK$ 12 approximately.)

Conditions of Service include superannuation (University 15%, appointee 5%), medical benefits, education allowance for children, long leave with pay, housing allowance for those whose salary is HK$ 115,140 p.a. or above and, for overseas appointee, accommodation and passage benefits as well.

Application Procedure: Application forms and general information concerning terms of service are obtainable from Personnel Section, The Chinese University of Hong Kong, Shatin, N.T. Hong Kong. Completed forms should be returned together with copies of recent testimonials and one set of major publications before January 31, 1981. Please mark "Application" on cover.

Bayero University, Kano, Nigeria

Applications are invited from suitably qualified candidates for the following vacancies :

(1) Department of Education

Senior Lecturer/Lecturer I/Lecturer II in :
(a) Education Administration
(b) Educational Psychology
(c) English (Remedial)
(d) Hausa/Hausa Methods

In all areas, preference will be given to candidates with a strong background in the discipline of education in addition to their academic specialization.

(2) Audio Visual Aids Centre

(a) Lecturer I or II in Educational Technology
(b) Technologist II

(3) Department of Adult Education and Community Services

Lecturer I or II (two vacancies) and Graduate Assistant (two vacancies) in :
(a) Education Finance
(b) Adult Education
(c) Primary/Teacher Education
(d) English as a second language (emphasis on remedial teaching for adult learners)

For posts (a) and (b), particularly, preference will be given to candidates with relevant field experience.

Qualifications :

Senior Lecturer :

Candidates should have sound academic qualifications, preferably a PhD, and less than five years' teaching, research or equivalent professional experience at university level. Candidates should have publications of high quality in reputable scholarly journals, and the capacity to initiate, develop and supervise research.

Lecturer :

Candidates should have sound academic or equivalent professional qualifications, usually an honours degree and a higher degree, preferably a doctorate. Teaching and research experience in a university or comparable institution will be relevant to level of appointment.

Graduate Assistant :

Candidates should hold a relevant honours degree, have pertinent experience, and demonstrated potential for further academic development.

Technologist II :

Candidates must possess a Full Technological Certificate awarded by City and Guilds after Part III of the Institute examination, and five years' experience in handling and maintaining electronic equipment. Strong preference will be given to candidates who have practical experience in handling Audio-Visual equipment. The successful candidate will be expected to have the ability to assist academic staff in the organization and management of the Audio-Visual Centre, including the handling of junior staff.

Salaries :

Senior Lecturer	GL 13 (N8,064 rd N8,924 per annum)
Lecturer I / Lecturer II	GL 12 (N7,404 to N8,082 per annum)
Graduate Assistant / Technologist II	GL 10 (N6,780 to N6,732 per annum)
Technologist II	GL 8 (N3,564 to N4,464 per annum)

(1 naira equals 80p approximately). Salaries, and Conditions of Service under review.

Method of Application :

Four typewritten copies of curriculum vitae, stating post, full names, date and place of birth, current postal address and telephone number, nationality, marital status, educational qualifications with dates, posts held with dates, detailed list of publications, names of three referees who know you professionally. Applicants should please request referees to send confidential reports to :

Principal Assistant Secretary (Recruitment)
Nigerian Universities Office
169 Tottenham Court Road, London W1P 9LE

to whom applications should be sent by January 5, 1980.

University of Papua New Guinea

Applications are invited for the following posts:

CO-ORDINATOR OF INTER-FACULTY PROGRAMME IN ENVIRONMENTAL SCIENCE
(Senior Lecturer in Environmental Sciences)

Applicants should have a PhD or equivalent. Other essential qualifications: demonstrated ability to innovate and administer in an interdisciplinary programme, research and experience in broad areas of environmental science, relevant tropical experience, ability to relate to the community outside the University.

SENIOR LECTURER/LECTURER IN EDUCATIONAL RESEARCH UNIT

The ERU has undertaken to provide an independent evaluation of SSCEP, the Secondary Schools Community Extension Project. This is a new innovation in Grade 9 and 10 of provincial high schools, aiming at teaching syllabuses in a more practical, village-oriented manner, to provide a more relevant education for school-leavers. Applicants should have proven ability to conduct, and report on, research. Familiarity with a wide range of research skills is necessary, including measurement of achievement, curriculum evaluation, interviewing and attitude surveys. Knowledge of SPSS and PNG conditions and schools would be desirable. The position will require extensive travel within Papua New Guinea. A fixed-term appointment of two-and-a-half years will be made. No housing available.

LECTURER/SENIOR TUTOR IN COMMERCE—GOROKA TEACHERS' COLLEGE

The post is in the Post-Vocational Training and Commercial Studies Department and is tenable as soon as possible. Applicants should hold a degree in Commerce or a related field, and a qualification and experience in teaching. Teaching experience as Secondary and/or Tertiary level in a developing country is especially desirable. The Department offers courses for specialist students who plan to teach the commerce syllabus in High Schools. Appointee may also be required to assist in the teaching of Accounting to one-year clerical teaching course students.

Salaries : Senior Lecturer : K17,125 per annum; Lecturer II/Senior Lecturer I : K15,275 per annum; Lecturer I/Senior Tutor I : K13 425 per annum (£1 sterling equals K1.58). Three-year contract, gratuity, support for approved research, rent-free accommodation, family passages, baggage allowance, leave fares after 18 months' service, education allowance, salary continuation scheme for extended illness or disability.

Detailed applications (two copies), including a curriculum vitae, a recent small photograph, and naming three referees, should be sent to the Assistant Secretary, Box 4820, University PO, Papua New Guinea, to arrive no later than January 8, 1981. Applicants resident in UK should also send one copy to Inter-University Council, 90/91 Tottenham Court Road, London W1P 0DT. Further details are available from either addresses.

BIRMINGHAM — THE UNIVERSITY

FACULTY OF MEDICINE AND DENTISTRY
ARTHRITIS AND RHEUMATISM COUNCIL
CHAIR OF RHEUMATOLOGY

Applications are invited for the above post to take main responsibility for the M.Sc. in Rheumatology and advise on teaching two courses: Medical Beliefs, Politics and Policy and Administration (appointment will be made at a point appropriate to satisfactory qualifications and experience on the Lecturer I scale: £8,405 to £9,515 (under review) rising to £11,575 plus £927 inner London Weighting.

Further details and application forms should be obtained from the Assistant Secretary (Personnel) (T), Birkbeck College, Malet Street, London WC1E 7HX, or (telephone 01-580 6822, extension 509). Closing date: January 15, 1981.

LONDON — BIRKBECK COLLEGE (University of London)

DEPARTMENT OF POLITICS AND SOCIOLOGY
LECTURESHIP IN POLITICS

Applications are invited for the above post to take main responsibility for the M.Sc. in Politics and advise on teaching two courses: Modern British Politics and Policy and Administration (appointment will be made at a point appropriate to satisfactory qualifications and experience on the Lecturer I scale: £8,405 to £9,515 (under review) rising to £11,575 plus £927 inner London Weighting.

Further details and application forms should be obtained from the Assistant Secretary (Personnel) (T), Birkbeck College, Malet Street, London WC1E 7HX, or (telephone 01-580 6822, extension 509). Closing date: January 15, 1981.

CARDIFF — UNIVERSITY COLLEGE

TUTOR ORGANISER FOR OVERSEAS STUDENTS
DEPARTMENT OF EDUCATION

Applications are invited from graduates, preferably with teaching experience, who are well acquainted with primary education in Africa. The post is on a three-year contract basis. Salary range £5,205 to £6,615 (under review) rising to £11,575 plus £927 inner London Weighting.

Applications (two copies) together with the names and addresses of two referees should be forwarded to the Registrar (Administration), Registry, University of Wales, Cathays Park, Cardiff CF1 3AT, from whom further particulars will be available.

Closing date: January 30, 1981. Reference 2/2001.

EXETER — THE UNIVERSITY

CENTRE FOR ARAB GULF STUDIES
SECRETARY

Applications are invited for the position of SECRETARY to the Centre for Arab Gulf Studies. Knowledge of Arabic is desirable but not essential. Organizing ability is an advantage.

The appointment will be for one year in the first instance with the possibility of extension. The post may commence as early as is practicable.

Salary will be up to a maximum of the range £5,405 to £6,615 (under review) plus £927 inner London weighting.

Applications (two copies) together with the names and addresses of two referees should be forwarded to the Registrar, University of Exeter, Northcote House, Exeter EX4 4QJ, quoting reference 2/2001.

AUSTRALIA — THE UNIVERSITY OF NEW ENGLAND

LECTURESHIP IN SOIL SCIENCE (Ref. 1/1)

Appointee will lecture and organize practical classes in introductory soil science courses, supervision of postgraduate student research and research in soil science. Appointee will be required to undertake research in his/her area of specialization. Appointee will be expected to be able to contribute to the teaching of other courses in the School of Rural Science, soil conservation and agronomy, and to undertake such other duties as may be assigned from time to time by the Director of the School.

Appointment is for three years in the first instance, with the possibility of extension thereafter.

Salary range $25,209 to $27,076 per annum. Duties to commence as soon as possible.

Applications (two copies) together with the names and addresses of two referees should be forwarded to the Registrar, University of New England, Armidale, New South Wales, 2351, Australia, quoting reference number and position title. Applicants should also write to referees to the Staff Officer without delay.

SURREY — THE UNIVERSITY

LECTURER IN PHARMACOLOGY
DEPARTMENT OF BIOCHEMISTRY

Applications are invited for a Lecturership in Pharmacology. The post is in the Department of Biochemistry and Pharmacology and is tenable in the Department of Biochemistry.

The successful candidate will be expected to participate in teaching pharmacology courses for undergraduate students in Biochemistry, Chemistry and to participate actively in research work.

Preference will be given to candidates with a higher degree in pharmacology and/or biochemistry and with interests in neuroscience, toxicology, industrial toxicology and an advanced knowledge of pharmacology.

Salary will be on the lecturer scale: £5,605 to £11,575 per annum.

Applications from men and women in the form of a curriculum vitae and naming three referees, should be sent to the Registrar, University of Surrey, Guildford, Surrey, GU2 5XH, by January 15, 1981. Please quote reference number 8/80.

Universities continued

AUSTRALIA

Applications are invited for the following posts, for which applications close on the dates shown. SALARIES (unless otherwise stated) are as follows: Post-Doctoral Research Fellow $A16,280-$A17,618 ; Senior Lecturer $A23,671-$A27,741; Lecturer $A17,738-$A20,663. Further details and application procedure may be obtained from the Association of Commonwealth Universities (Appts), 36 Gordon Square, London WC1H 0PF, unless otherwise stated.

The University of Sydney

LECTURER IN BEHAVIOURAL SCIENCES IN MEDICINE

Applications invited from candidates with postgraduate training in one or more of the behavioural sciences (especially sociology, anthropology or social psychology) and some training and/or experience in application of their discipline in health and medical fields. Appointee will be involved in teaching and in the development of areas such as sociology, culture and health in the profession of medicine, and delivery of health care in Australia, in a multidisciplinary course of behavioural sciences for medical undergraduates begun in 1979.

The position is expected to be filled by a probationary appointment of three years. Commencing salaries in tenure bill of all the University's professorials for tenure are deemed to be satisfactorily met there may be granted at the time of appointment.

January 16, 1981.

LECTURERS (2) IN LAW

Department of Law

These positions are expected to be filled by probationary appointments of three years commencing at leading to tenure (no. 1) at the University's requirements for tenure are deemed to be satisfactorily met, there may be granted at the time of appointment.

January 9, 1981.

University of Western Australia, Perth

LECTURER IN BEHAVIOURAL SCIENCE AND MEDICINE

Department of Psychiatry and Behavioural Science

Applicants should have qualifications in one of the behavioural and/or social sciences and be interested in the psychological and social aspects of illness and the health care system. Prior experience in the teaching of medical students is desirable. The appointee will be responsible for organizing and participating in the teaching of behavioural sciences to medical students, the training of postgraduates and assisting in research in areas related to his/her areas of interest and expertise. Opportunities for research facilities and ready access to clinical material are available. Appointee will be expected to hold a Ph.D. or equivalent research degree.

Salary: Senior Lecturer: $A23,671 to $A27,741 per annum. Superannuation, housing assistance, rent-free accommodation, family passages, baggage allowance, leave fares after 18 months' service, education allowance, salary continuation scheme for extended illness or disability.

Detailed applications (two copies), including a curriculum vitae, a recent small photograph, and naming three referees, should be sent to the Assistant Secretary, Box 4820, University PO, Papua New Guinea, to arrive no later than January 8, 1981. Applicants resident in UK should also send one copy to Inter-University Council, 90/91 Tottenham Court Road, London W1P 0DT. Further details are available from either addresses.

BELFAST — THE QUEEN'S UNIVERSITY

LECTURESHIPS

Applications are invited for the following LECTURESHIPS :

1. LAW

One lecturership is open to males from March 1 1981 or such other date as may be agreed. Preference may be given to candidates with a degree in commercial law or national law.

2. EDUCATION

THE LECTURESHIPS in the DEPARTMENT OF EDUCATIONAL STUDIES in CURRICULUM STUDIES are available from April 1 1981 or at the earliest thereafter. One lecturership is open to males. The lecturership will be tenable in Curriculum Studies and Science and Counselling and Guidance. Applicants should be prepared to teach primarily for courses in Educational Administration.

For appointment 1 above, the salary scale is £5,605 to £11,575 per annum, but one may be offered on any point on the scale according to age and experience and up to one of the first three points may be offered subject to a period of probation not exceeding three years.

Salary scale for appointment 2 above is £5,605 to £11,575 per annum.

Superannuation, housing assistance, rent-free accommodation, family passages, baggage allowance, education allowance, vacation and study leave.

Detailed applications (two copies), including a curriculum vitae and naming three referees, should be sent to the Registrar (Appointments), National University of Lesotho, PO Roma 180, Lesotho, to arrive not later than January 5, 1981. Applicants resident in United Kingdom should also send one copy to Inter-University Council, 90/91 Tottenham Court Road, London W1P 0DT. Further details are available from either address.

ESSEX — THE UNIVERSITY

LECTURER IN THE THEORY OF SOCIOLOGY

Applications are invited for a Lecturership in the Department of Sociology, tenable from October 1, 1981. Applicants from any field of sociology will be considered. The Department has particular teaching needs in the politics of deviance and law, and methods of sociological analysis. Applicants with a European interest would be welcome.

Salary scale: £5,605 to £11,575 (under review).

Applications (nine copies) including a curriculum vitae and the names and addresses of two referees, should be sent to the Registrar (AD/111/NES), Registry, University of Essex, Wivenhoe Park, Colchester CO4 3SQ, from whom further particulars may be obtained, by January 15, 1981.

ESSEX — THE UNIVERSITY

LECTURESHIPS IN LAW

Applications invited for two lectureships in Law, to newly established Law School, to be filled from October 1, 1981. Salary scale: £5,605 to £11,575 per annum (under review).

Applications (nine copies) including a curriculum vitae and the names and addresses of three referees, should be sent to the Registrar (AD/111/NES), Registry, University of Essex, Wivenhoe Park, Colchester CO4 3SQ, from whom further particulars may be obtained, by January 15, 1981.

UNIVERSITY OF THE WEST INDIES JAMAICA

Applications are invited for the following posts :—

PROFESSOR/SENIOR LECTURER IN PHYSICS

tenable as soon as possible.

Appointee will be expected to consolidate and/or develop research interests in the Department, especially those which coincide with his/her own interests, and which are expected to fall among the following, at present being pursued in the Department: Atmospheric Physics, Radio Astronomy, Energy Studies, Materials Science (Metals and Fibres).

ELECTRON MICROSCOPIST, FACULTY OF NATURAL SCIENCES (Lecturer Grade)

Appointee will be required to take charge of a transmission as well as a scanning electron microscope and to teach a course in his/her speciality. Preference may be given to applicants with interest in any of the Biological Sciences.

LECTURER/ASSISTANT LECTURER IN CHEMISTRY

Applicants with special interests in Applied Chemistry or Food Chemistry will be given preference. Appointee will be expected to play a major role in teaching and the organization of courses in one or more of the above fields and to assist in other areas of Chemistry. Contribution to the Departmental research programme is also expected.

LECTURERS/ASSISTANT LECTURERS IN PHYSICAL CHEMISTRY

Applicants should be suitably qualified in Physical Chemistry or Radiochemistry. Appointee will be expected to play a major role in teaching and the organization of courses in the Department and to contribute to its research programme.

LECTURER/ASSISTANT LECTURER IN THE DEPARTMENT OF BIOCHEMISTRY

Preference for applicants whose training or research involved Microbiology. Duties of appointee will include lecturing and demonstrating to undergraduates in the Faculties of Medicine and Natural Sciences. He/she will be expected to play a major role in running undergraduate courses in Microbiology and in developing a postgraduate research programme in that area. Appointment will run to September 30, 1983.

Salary scales: Professor: J$22,848 to J$26,284 per annum; Senior Lecturer: J$17,748 to J$21,717 per annum; Lecturer: J$15,080 to J$20,040 per annum; Assistant Lecturer: J$13,308 to J$14,088 per annum (£1 sterling equals J$4.27). FSSU, Study and Travel Grant, Unfurnished accommodation or housing allowance, Family passages.

Detailed applications (two copies), including a curriculum vitae and naming three referees should be sent as soon as possible to the Registrar, University of the West Indies, Mona, Kingston 7, Jamaica. Applicants resident in UK should also send one copy to Inter-University Council, 90/91 Tottenham Court Road, London W1P 0DT. Further details are available from either address.

UNIVERSITY OF PAPUA NEW GUINEA

Applications are invited for the following posts in the LAW FACULTY :

1. SENIOR LECTURER/LECTURER in Criminal Law, Criminal Procedure, Civil Procedure and Remedies.
2. SENIOR LECTURER/LECTURER in Constitutional Law.
3. LECTURER 1/2 in International Law and related specialities.

Applicants for Senior Lecturers posts must be experienced teachers with at least seven years teaching at tertiary institutions. A doctorate is expected, but a Masters with substantial professional experience, either in teaching or in practice may be substituted. Appointee to this level must be prepared and able to contribute to the promotion of a vigorous intellectual environment within the Faculty. This would involve, amongst other things, the encouragement of less experienced members of staff to engage in research and publication. It would also involve research and publication on matters of national relevance and importance. For applicants to Lecturers posts, a Masters is expected, but those with a first honours degree and appropriate professional experience will be considered.

Salaries : Senior Lecturer K17,125 pa. Lecturer 2 K15,275 pa. Lecturer 1 K13,425 pa. (£1 sterling = K1.58). Three-year contract; gratuity; support for approved research; rent-free accommodation; family passages; baggage allowance; leave fares after 18 months service; education allowance; salary continuation scheme for extended illness or disability. Applicants who wish to arrange accommodation from their home institutions will be welcomed.

Detailed applications (2 copies), including a curriculum vitae, a recent small photograph, and naming 3 referees, should be sent to the Assistant Secretary, Box 4820, University P.O., Papua New Guinea, to arrive no later than 8 January 1981. Applicants resident in UK should also send 1 copy to Inter-University Council, 90/91 Tottenham Court Road, London W1P 0DT. Further details are available from either address.

UNIVERSITY OF MALAWI

Applications are invited for the post of

DIRECTOR OF THE MALAWI INSTITUTE OF EDUCATION

candidates should have relevant postgraduate qualifications and preferably include a Ph D They should have educational experience at various levels in teaching, administration, consultancy and research in one or more developing countries. Preference will be given to those with proven ability in institutional leadership. The Director, who will enjoy Professorial status as a Member of the Faculty of Education, will be responsible to the Board of Governors of the Institute for implementing the academic programmes of the Institute, and for the development, organisation and well-being of the Institute. He/she will be expected to work closely with the Ministry of Education and the University. Salary scale: K7,900-10,500 p.a. (£1 sterling=K1.97). Plus either an expatriate addition of between K1,620 and K1,820 (taxable in Malawi) or the British Government may provide salary supplementation in range £8,940-£10,260 p.a. (sterling) reviewed annually —normally tax-free and associated benefits. Gratuity; superannuation scheme (transferable with F.B.S.U.); family passages; various allowances; biennial overseas leave, housing. Detailed applications (2 copies), including a curriculum vitae and naming 3 referees, should be sent to the University Registrar, University Office, P.O. Box 278, Zomba, Malawi, to arrive no later than 8 January 1981. Applicants resident in UK should also send 1 copy to Inter-University Council, 90/91 Tottenham Court Road, London, W1P 0DT. Further details are available from either address.

BIRMINGHAM — THE UNIVERSITY

FACULTY OF MEDICINE AND DENTISTRY
CHAIR OF SOCIAL MEDICINE

Applications are invited for a Chair of Social Medicine, which is currently held by the Director of Social Medicine.

Salary in the clinical professorial range maximum £10,675, with superannuation.

Further particulars available from the Registrar, University of Birmingham, P.O. Box 363, Birmingham B15 2TT to whom applications should be sent. Closing date for receipt of applications, including those from overseas applicants, should be received by January 15, 1981.

KENT — THE WYE COLLEGE (University of London)

Applications are invited from qualified LIBRARIANS for the post of Assistant Senior Librarian or the post of Assistant Librarian. Salaries will be in accordance with the Universities Scale, commencing at £5,605 per annum for Assistant Librarian and £6,615 per annum for Assistant Senior Librarian. Superannuation, housing assistance, rent-free accommodation, family passages, baggage allowance, education allowance, vacation and study leave.

Detailed applications (two copies), including a curriculum vitae and naming three referees, should be sent to the Assistant Registrar (Appointments), National University of Lesotho, PO Roma 180, Lesotho, to arrive not later than January 5, 1981. Applicants resident in United Kingdom should also send one copy to Inter-University Council, 90/91 Tottenham Court Road, London W1P 0DT. Further details are available from either address.

NATIONAL UNIVERSITY OF LESOTHO

Applications are invited for the following posts in the DEPARTMENT OF AFRICAN DEVELOPMENT, tenable as soon as possible :—

ASSOCIATE PROFESSOR/SENIOR LECTURER

Applicants must have a good interdisciplinary academic background in the Social Sciences, and at least a Masters degree. Specialization is required in Development Studies, African History, Sociology, Economics or Political Science, with at least five years' teaching experience at university level. Administrative experience and research on Africa, though not essential, are preferred. Appointee will teach courses at all levels of a four-year programme, participate in the administration of the Department, and develop new courses and activities.

LECTURER

Applicants must have an MA in Development Studies, African History, Sociology, Economics or Political Science. Teaching experience at university level would be an advantage, but is not essential. Knowledge of issues/problems of development in the Third World in general, and in Africa in particular, is important. Appointee will teach first, second, and third-year courses in a four-year programme, and participate in other professional activities of the Department.

Salary scales: Associate Professor: R14,424 to R16,504 per annum; Senior Lecturer: R11,589 to R13,248 per annum; Lecturer: R9,244 to R11,180 per annum (£1 sterling equals R1.80). In very exceptional circumstances the British Government may supplement salaries in range £2,790 to £4,980 per annum (sterling) for married appointees or £1,716 to £3,978 per annum (sterling) for single appointees (reviewed annually; normally tax-free) and associated benefits. Gratuity, inducement allowance for those not qualifying for supplementation, reasonable rental accommodation, family passages, baggage allowance, education allowance, vacation and study leave.

Detailed applications (two copies), including a curriculum vitae and naming three referees, should be sent to the Assistant Registrar (Appointments), National University of Lesotho, PO Roma 180, Lesotho, to arrive not later than January 5, 1981. Applicants resident in United Kingdom should also send one copy to Inter-University Council, 90/91 Tottenham Court Road, London W1P 0DT. Further details are available from either address.

UNIVERSITY OF PAPUA NEW GUINEA

Applications are invited for the post of

Senior Lecturer/Lecturer in Fisheries And Population Ecology

In the Department of Biology. Applicants should have a Ph.D and appropriate research and teaching experience. Appointee will be expected to teach undergraduate courses in fisheries biology, marine ecology and population ecology, and to contribute to general biological teaching. A good understanding of population theory, sampling and statistics is essential. He/she will also be expected to encourage, supervise and develop postgraduate research studies. Excellent marine research and teaching facilities are available at the University's Motupore Island Research Centre and the appointee will be expected to play an active role in the further development of these facilities.

Salaries: Senior Lecturer K17,125 p.a. Lecturer 2 K15,275 p.a. Lecturer 1 K13,425 p.a. (£1 sterling = K1.58). Three-year contract; gratuity; support for approved research; rent-free accommodation; family passages; baggage allowance; leave fares after 18 months service; education allowance; salary continuation scheme for extended illness or disability. Applicants who wish to arrange accommodation from their home institutions will be welcomed.

Detailed applications (2 copies), including a curriculum vitae, a recent small photograph, and naming 3 referees, should be sent to the Assistant Secretary, Box 4820, University P.O., Papua New Guinea, to arrive no later than 8 January 1981. Applicants resident in United Kingdom should also send 1 copy to Inter-University Council, 90/91 Tottenham Court Road, London, W1P 0DT. Further details are available from either addresses.

Southampton THE UNIVERSITY

1 MEDIA PRODUCER

DEPARTMENT OF TEACHING MEDIA
(re-advertisement)

Applications are invited for the post of Producer to advise on and be responsible for the production of audio-visual or tape-slide programmes for University Lecturers and for Medical Health Service Tutors employed by the Wessex Regional Health Authority. Some experience in educational television production would be an advantage, since the Department is currently developing this area of work. Applicants should preferably be graduates with some teaching experience. A sound knowledge of educational media production and of the techniques of evaluating the effectiveness of learning materials is essential.

The person appointed will join the Department's Media Productions Section working closely with Film and Television Producers, and will be supported by an established team of Graphics Artists and Photographers. He/she will also work the services of a Technician experienced in recording and editing processes.

The appointment will be made within the salary scale (Other Related Staff) 1A of £8,605 to £10,565 per annum by 11 increments. The initial salary will depend on the qualifications and experience of the successful candidate.

Applications (7 copies) giving a curriculum vitae and the names of three referees should be returned to the Staffing Secretary of the University of Southampton, Highfield, Southampton, SO9 5NH, from whom further particulars may be obtained, before 17 January, 1981. Please quote Ref: THES.

CAMBRIDGE — THE UNIVERSITY

UNIVERSITY LECTURER in ROMAN ARCHAEOLOGY to take up appointment as October 1, 1981 or as soon as possible thereafter, the appointment being for three years with the possibility of reappointment to the retiring age.

The prospective scale of stipends for a University Lecturer is £5,605 to £11,575 per annum, plus an annual increment of £172,970.

Further information concerning the duties and conditions of the appointment may be obtained from the Secretary of the Appointments Committee of the Faculty of Classics, Sidgwick Avenue, Cambridge CB3 9DA (110 caption) with the names of two referees to be submitted by not later than Monday, January 5, 1981.

Universities continued

BOTSWANA

THE UNIVERSITY COLLEGE

Applications are invited for the post of LECTURER IN CHILD DEVELOPMENT in the Department of Educational Foundations, London from August 1, 1981.

Applicants should hold a doctorate with specialization in developmental psychology with emphasis on child development. They should have teaching experience at a university or college and research experience in child development preferably in a third world country. It would be an added advantage.

Duties of appointee: Teach child development and childhood education to under and undergraduates; develop early childhood education programmes suitable for Botswana; supervise students on nursing practice and attend ethics degree students; assist teacher training colleges in developing national programmes of child study; offer in-service courses and workshops for teachers. Salary scale p.a. P7,212 to P11,661 (£1 sterling equals P1.70). In the end-of-contract circumstances, the British Government may cover 50 per cent of accommodation in range P1,296 to P3,374 (at sterling). Provided annually tax-free and other related benefits. Contract addition: family passage; baggage allowance; gratuity.

Detailed applications (two copies), including a curriculum vitae and naming three referees, should be sent to the Registrar, University College, Lobatsi, Private Bag 0033, Gaborone, Botswana, to arrive no later than January 15, 1981. Applicants resident in United Kingdom should also send one copy to Inter-University Council, 36/37 Tavistock Square, London WC1H 9BT. Further details are available from either address.

LONDON

THE UNIVERSITY

THE LONDON SCHOOL OF ECONOMICS

LECTURESHIPS IN LAW

Applications are invited for appointment from October 1, 1981 to two LECTURESHIPS in LAW.

Appointment will be on the salary scale for lecturers at £6,290 to £11,670 a year plus £600 a year London Allowance. In assessing the starting salary, consideration will be given to qualifications, age and experience.

Application forms and further particulars are available, on receipt of a stamped-addressed envelope, from the Administrative Officer (Ref. 11), The London School of Economics, Houghton Street, London WC2A 2AE. Closing date for applications: January 31, 1981.

NEW ZEALAND

UNIVERSITY OF AUCKLAND

LECTURESHIP/SENIOR LECTURESHIP IN SOLID EARTH GEOPHYSICS

(Department of Geology)

Closing date: February 13, 1981.

Applicants should have a research degree in Geophysics and Geophysical Exploration, teaching experience, the ability to supervise postgraduate students, and the ability to develop a personal research programme. Preference will be given to applicants with experience of field study rather than those with experience in applied geophysics, geophysical prospecting and geophysical techniques.

LECTURESHIP/SENIOR LECTURESHIP IN LAW

Closing date: January 30, 1981.

Applicants should have a higher degree and previous experience in one or more of practice, teaching and professional practice in commercial law. Preference will be accorded to those qualified to teach company law, equity, taxation and torts.

Commencing salaries will be determined in accordance with qualifications and experience. Young salary scales are available. Superannuation (2+3) scheme applies. Lecturers/Senior Lecturers are expected to undertake a reasonable amount of administrative work. Conditions of appointment are generous, and provide for a sabbatical leave for all positions. Relocation expenses will be allowed in all positions. Applications (Academic Appointments) (University of Auckland, Private Bag, Auckland, New Zealand) or from the Association of Commonwealth Universities (Appts.), 36 Gordon Square, London WC1H 0PF, quoting reference number AL 77.

SALFORD

THE UNIVERSITY

DEPARTMENT OF MODERN LANGUAGES

LECTURESHIP IN ENGLISH

Preference will be given to candidates with interest in one or more of the following areas: Practical Criticism; Stylistics; Language; Literary Criticism and Literary Theory. Those with interests in other areas of literature should feel free to apply.

Salary Scale within the range £6,504-£11,970 under review. U.S.S. benefits.

Further particulars and application forms are available from the Registrar, University of Salford, Salford M5 4WT (tel: 061-736 5843, ext. 217), to whom completed applications should be returned by January 23, 1981, quoting reference number AL 77.

ZIMBABWE

THE UNIVERSITY

DEPARTMENT OF SURGERY

SEN TECHNICIAN

Applications are invited for the post of SEN Technician in the Operations Theatre. The successful applicant should have experience in all types of general operations and be competent in sterilization techniques. Knowledge of anaesthetics would be an advantage.

The appointment is for a period of 3 years in the first instance with the possibility of renewal.

Salary scale, according to qualifications and experience: Assistant Medical Lab. Technician: £2,313 x £96-£2,697 Medical Lab. Technician: £2,697 x £96-£3,073 Senior Medical Lab. Technician: £3,073 x £96-£3,457 x £96-£3,841 x £96-£4,225 x £96-£4,609 x £96-£4,993.

Conditions of service: Family farm and allowance for transport to and effects of service accepted from outside Zimbabwe. Assistance with Medical Aid Societies. Attractive leave conditions.

Applications (6 copies required) Applications giving full name, place and date of birth, etc., qualifications, employment and experience, present salary and address of referees and should be sent to the Administrative Officer (Staff), University of Zimbabwe, PO Box MP 167, Mount Pleasant, Salisbury, Zimbabwe.

LONDON

THE UNIVERSITY

THE LONDON SCHOOL OF ECONOMICS

LECTURESHIPS IN ECONOMIC HISTORY

Applications are invited for appointment from October 1, 1981 to two LECTURESHIPS in Economic History.

Appointment will be on the salary scale for lecturers at £6,290 to £11,670 a year plus £600 a year London Allowance. In assessing the starting salary, consideration will be given to qualifications, age and experience.

Application forms and further particulars are available, on receipt of a stamped-addressed envelope, from the Administrative Officer (Ref. 10), The London School of Economics, Houghton Street, London WC2A 2AE. Closing date for applications: January 31, 1981.

SURREY

THE UNIVERSITY

DEPARTMENT OF HOME ECONOMICS

LECTURER IN FOOD STUDIES

A vacancy exists for a Food Scientist, preferably with a higher degree, to lecture and conduct practical classes in food preservation and food science. Industrial experience and a knowledge of nutrition would be an additional advantage.

The successful applicant should be interested in collaborating with specialists in other fields both for research and undergraduate teaching.

Departmental research interests include the relationships between food properties, sensory perception and consumer reactions.

Salary scale: £4,605 to £11,575 per annum.

Further particulars may be obtained from the Academic Secretary (LF/E), University of Surrey, Guildford, Surrey GU2 5XH or telephone Guildford 71291, ext. 453, to whom curriculum vitae from men and women, including the names and addresses of two referees, should be sent by January 31, 1981, quoting reference 7118S.

SURREY

THE UNIVERSITY

DEPARTMENT OF HOTEL, CATERING AND TOURISM MANAGEMENT

LECTURER IN ECONOMICS TOURISM

Applications are invited from candidates for the above post who will be able to share in teaching responsibilities and initiate and undertake research in this area.

Salary will be in the range £4,605 to £11,575 per annum. Further particulars about the post are available from the Academic Registrar (LF/E), University of Surrey, Guildford, Surrey GU2 5XH, to whom applications should be made, in the form of a curriculum vitae giving the names and addresses of two referees by January 31, 1981 quoting reference 7118S.

ZIMBABWE

THE UNIVERSITY

Applications are invited for the following post:

LECTURESHIP SENIOR LECTURESHIP IN EDUCATION

(Learning and teaching is a second language)

Applicants should have experience in teaching in a second language in a developing country and higher education of graduate level.

Salary scales according to qualifications and experience: Senior Lecturer Scale: Sec. 2 £14,352 to £15,552 Sec. 1 £13,152 to £14,352.

Lecturer Grade 1, £8,496 to £12,792 (£1,704).

Lecturer Grade II, £1,675 to £3,346 to £6,358 by £582 to £8,116.

Both permanent pensionable terms and short-term contracts are offered for academic posts.

Further particulars on the above post on conditions of service and/or method of application, should be obtained prior to submitting an application from the Appointments Secretary (Staff), University of Zimbabwe, P.O. Box MP 167, Mount Pleasant, Salisbury, Zimbabwe.

Overseas applicants should obtain further particulars from the Association of Commonwealth Universities (Appts.), 36 Gordon Square, London WC1H 0PF.

Applications should be submitted by January 26, 1981.

ZIMBABWE

THE UNIVERSITY

INSTITUTE OF MINING RESEARCH

RESEARCH FELLOWSHIP IN ROCK MECHANICS

Applications are invited for the post of research fellow in rock mechanics at the Institute of Mining Research, University of Zimbabwe. Some geological and mining engineering with an interest in rock mechanics.

The research is concerned with the determination of the stress field in certain mines situated in Zimbabwe. The data will be interpreted in relation to structural mapping and to rock types and the effect of mining operations upon the stress pattern will be determined.

The fellowship is for a period of two years and the successful applicant will be expected to submit a thesis for M.Phil. at the completion of his studies. Depending upon progress, it may be possible to extend the studies for a third year, leading to the degree of D.Phil.

Salary scales and conditions of service for research fellows: Junior Research Fellow: £3,301 by 220 to 4,158; (inclusive) Fellow Grade II: £4,158 by 360 to 5,518; Research Fellow: £5,518 by 578 to 7,018; Senior Research Fellow: £7,018 by 360 to 9,808. (approximate equivalent in £ sterling).

Relocation allowance and allowance in respect of dependants, criteria on unmarried or married status recruitment outside Zimbabwe. Assistance with accommodation, leave, superannuation and medical aid scheme.

Applications (six copies required) Applications should give full personal particulars (including full surname and date of birth, nationality, marital status, present salary, date of availability and names and addresses of three referees and should be sent to the Appointments Officer (Staff), University of Zimbabwe, PO Box MP 167, Mount Pleasant, Salisbury, Zimbabwe. Overseas applicants should send an additional copy of their application to the Association of Commonwealth Universities (Appts.), 36 Gordon Square, London WC1H 0PF.

Closing date for receipt of applications December 31, 1980.

Librarians

UNIVERSITY OF DUBLIN Trinity College

MAP LIBRARIAN

Applications are invited for a new post of Map Librarian in Trinity College Library.

Candidates should have a good honours degree in an appropriate subject, and preferably a recognised library qualification, with several years experience, ideally in direct contact with map collections.

The appointment will be made on the Assistant Librarian grade I scale: IR7,655-£10,814.

Further particulars and application forms may be obtained from:—

The Establishment Officer, West Theatre, Trinity College, Dublin 2

The closing date for receipt of completed applications will be Friday, 30th January, 1981.

Colleges of Further Education

EDUCATION COMMITTEE

Canterbury College of Technology

VICE-PRINCIPAL

Applications are invited from honours graduates with professional qualifications and substantial relevant experience in education and in industry or commerce for the position of Vice-Principal.

The College is a Group 7 institution and an important centre for a wide range of full-time and part-time Higher, Further and Adult Education courses.

The Vice-Principal is concerned with every aspect of the College's work and in the coordination of its six academic departments' efforts. special responsibilities include central resources, college building programme, examining body applications and courses approvals, in-service training and staff development, public relations and publicity, safety and security, and school liaison.

Salary: £15,733 per annum (subject to review). Starting date September 1, 1981.

Further particulars and application forms may be obtained from:—

The Principal, Canterbury College of Technology, New Dover Road, Canterbury, Kent CT1 3AJ (telephone Canterbury (0227) 66081), quoting the reference V12W.

KENT COUNTY COUNCIL

Fellowships and Stndentships

OXFORD

WOLFSON COLLEGE

JUNIOR RESEARCH FELLOWSHIP IN THE HISTORY OR PHILOSOPHY OF SCIENCE OR MATHEMATICS OR THE SOCIAL PSYCHOLOGICAL ASPECTS OF RELIGION

The College proposes to elect a Junior Research Fellow for three years from October 1, 1981 in one of the following subjects:

(a) The History of Science and or Mathematics.

(b) The Philosophy of Science and or Mathematics.

(c) The Social or Psychological Aspects of Religion.

A second election may be made, though not more than one election will be made in any one of the three subjects. Science will be understood in a meaning natural science, and excluding the social sciences. Applications are invited from any transferable research, preferably under 30 with at least two years research experience in the subject. The annual stipend will be £4,225 plus any general retaining increase in academic salaries awarded after October 1, 1981, together with Common Table Fights (moves free meals in college). The Fellow will be offered single accommodation in College if available, or a housing allowance in lieu. Further particulars may be obtained from the President's Secretary, Wolfson College, Oxford OX2 6UB.

Applications, in duplicate and detailed, signed, should reach the President by February 15 1981.

OXFORD

ST. ANNE'S COLLEGE

KATHLEEN BEUMONT RESEARCH FELLOWSHIP AND SCHOLARSHIP

Applications are invited for the Kathleen Beumont Research Fellowship and Scholarship in Mediaeval Arabic Studies, 1981. It is a requisite of the fellowship that the holder should be a national of one of the countries of the Middle East. Preference will be given to a candidate with a degree in Arabic and must hold a first or Second Class Honours degree. A Research Scholarship for the Scholarship must be awarded to a non-graduate (or four year standing) student who is not a graduate, and eligible to apply.

Further particulars may be obtained from the College Secretary, St. Anne's College, Oxford OX2 6HS, to whom applications should be submitted not later than January 19, 1981.

Polytechnics

SHEFFIELD CITY POLYTECHNIC

DEPARTMENT OF HOTEL & CATERING STUDIES & HOME ECONOMICS

LECTURER II IN FOOD STUDIES

Graduate required with degree in Food Science, Food Technology or (science-orientated) Hotel and Catering Management and interest in developing the teaching of food production in catering studies, experience in catering and food production an advantage.

The Department's teaching includes degrees in Catering Systems, Food Marketing Sciences and Education, together with a Post-graduate Diploma, diplomas and higher degrees by research.

Salary will be at the appropriate point within the scale £6,012-£8,762.

Application forms and further details from the Personnel Officer, Sheffield City Polytechnic (Dept. THES), Hallcrofts House, Fitzalan Square, Sheffield S1 2BB or tel. (0742) 20911, ext. 387. Completed forms should be returned by 2nd January.

LONDON N7

THE POLYTECHNIC OF NORTH LONDON

FACULTY OF ECONOMIC AND ADMINISTRATIVE STUDIES

DEPARTMENT OF BUSINESS STUDIES

LECTURER II (Grade II) IN MARKETING

Applicants should hold a good honours degree in a relevant subject area, preferably higher (Master's) degree. Operational experience, teaching experience and/or industrial/commercial experience.

The successful candidate will be expected to participate in the teaching of Marketing in the broad, integrated approach to Business Studies.

Salary scale: Lecturer Grade II, £6,012 to £9,702 plus £700 London Allowance. (Salary is formal approval.)

Start at the top of the Lecturer Grade II Scale may be offered to the most suitable candidate.

Application form and further particulars, to be returned by January 23, 1981, may be obtained from the Establishment Officer, The Polytechnic of North London, Holloway Road, London N7 8DB.

Closing date: 14 days from the appearance of this advertisement.

LONDON

THE POLYTECHNIC OF CENTRAL LONDON

SCHOOL OF ENGINEERING AND SCIENCE

SENIOR LECTURER

MECHANICAL ENGINEERING—THERMO-DYNAMICS

Applications are invited from candidates suitably qualified to teach undergraduates in and lead the development of the work in the subject. Candidates should have experience or interest in one or more of the following:

Engine test cells.
Power generation plant.
Gas turbines.
Energy conservation engineering and systems.
Heating.

Lecturer in charge design.

Candidates will be required to teach at all levels, initiate research and have an interest in undergraduate research opportunities. The appointment initially will be offered as a three year contract.

Further particulars and application forms can be obtained from the Establishment Officer, 309 Regent Street, London W1R 8AL. Closing date: January 31, 1981.

BRISTOL

THE POLYTECHNIC

DEPARTMENT OF ENGINEERING

Applications are invited to study for a PhD in the following post, starting in conference as soon as possible.

LECTURER II/SENIOR LECTURER II IN DIGITAL SYSTEMS

Ref No. L02 36

Preference will be given to candidates with industrial experience in digital systems design, including computer-aided design, computer simulation, microprocessor applications. Teaching ability is a requisite and would be an advantage.

Salary scale: Lecturer II £6,012 to £9,702 plus £700 London Allowance. (Salaries are formal approval.)

Application forms and further particulars, to be returned by January 23, 1981, may be obtained from the Establishment Officer, The Polytechnic, Coldharbour Lane, Frenchay, Bristol BS16 1QY.

Please quote reference Number L02 36 in all communications.

PORTSMOUTH

THE POLYTECHNIC

DEPARTMENT OF BUSINESS STUDIES

LECTURER/SENIOR LECTURER IN DATA PROCESSING

Preference will be given to candidates who are specialists in data processing, possessing a Degree and related experience, and/or qualifications and experience.

LECTURER: £6,012 to £9,702 per annum.

SENIOR LECTURER: £8,992 to £11,970 per annum.

Application forms and further details from the Staff Officer, Portsmouth Polytechnic, Anglesea Terrace, Portsmouth PO1 3DJ, to whom completed applications should be returned by January 23, 1981. Quoting ref. 2/1V. The THES.

Polytechnics

ULSTER POLYTECHNIC

Faculty of Arts

LECTURER II/SENIOR LECTURER IN GERMAN

Applications are invited from candidates preferably with a Higher Degree and Research experience in German Language and Society. Preference will be given to candidates with an interest in the teaching of the subject in a Business or Economics context.

LECTURER II/SENIOR LECTURER IN FRENCH

Applications are invited from candidates preferably with a Higher Degree and Research experience in French Language and Literature. Preference will be given to candidates with an interest in the teaching of the subject in a Business or Economics context or in those who are prepared to undertake appropriate training in these areas.

Faculty of Business and Management

LECTURER II/SENIOR LECTURER IN FINANCIAL ACCOUNTING/MANAGEMENT ACCOUNTING

An additional Lecturer II/Senior Lecturer is required to join the accounting team. Applicants should have ACA/ACCA/ACMA and/or a business/accounting degree at honours level.

Faculty of Technology

LECTURER II/SENIOR LECTURER IN GENERAL PRACTICE SURVEYING (ESTATE MANAGEMENT)

Applicants should be Chartered Surveyors in the general practice division to teach in the surveying and allied course. Possession of a degree or other qualification in Economics, Law, Geography or Planning would be an advantage.

LECTURER II/SENIOR LECTURER IN MARINE ENGINEERING

Applicants are invited for the above post within the School of Maritime Studies in the Marine Technology Division which covers work on marine engineering and naval architecture/shipbuilding. Candidates should preferably be Chartered Engineers and possess a DOT Certificate of Competency in Marine Engineering together with relevant industrial and/or teaching experience.

LECTURER II/SENIOR LECTURER IN CONSTRUCTION

Applicants should be Graduates or Professionally qualified in Building or Architecture.

The successful applicant will be required to teach on degree and higher technician level courses.

Salary Scales: Senior Lecturer £8,952-£10,539/£11,295.
Lecturer II £6,012-£9,702.

The Polytechnic is a direct grant institution with an independent Board of Governors. It opened in 1971 and has a student population of some 7,600. It has extensive new purpose-built accommodation, including 830 residential places on the 114-acre campus overlooking the sea at Jordanstown, a pleasant and quiet residential area. There is a scheme of assistance with removal.

Further particulars and application forms which must be returned by 5 January 1981 may be obtained by telephoning Whitehey (0231) 65131 Ext 2243 or by writing to:
The Establishment Officer, Ulster Polytechnic, Shore Road, Newtownabbey, Co. Antrim 0737 0QB.

BRIGHTON POLYTECHNIC (EASTBOURNE)

CHELSEA SCHOOL OF HUMAN MOVEMENT

LECTURER II IN PSYCHOLOGY (TEMPORARY)

Applications are invited for the post of temporary Lecturer in Psychology in the Chelsea School of Human Movement.

The successful candidate will be expected to contribute to the teaching of Psychology on degree courses in Physical Education, Sports Science and Human Movement.

Candidates should possess a degree in Psychology or related subject, and have an interest in psychological aspects of physical education and sport.

An ability to contribute to the teaching of some area of practical physical activity would be an advantage.

The post is available immediately and tenable until 31st August, 1981.

Further details and application forms from Personnel Dept., Brighton Polytechnic, 87 Meads Road, Eastbourne. Tel. 21400 Ext. 205. Closing date 31st December, 1980.

Appointments Wanted

CAMBRIDGE PHYSICS GRADUATE [illegible] and intellectual [illegible] seeks [illegible] Head of [illegible] Cambridge [illegible] senior position in [illegible] Education [illegible] Administration, [illegible] Publishing, social [illegible] Company, curriculum [illegible] Experience. All areas of [illegible] Dept. THES, Wyvern House, Wyvern Quay, [illegible] 1TV. The THES.

Personal

IMMEDIATE ADVANCES

£100 to £20,000

Written terms on request

REGIONAL TRUST LTD.
31 Cover Street, Piccadilly
London W1A 4RT
Phone: 01-491 8934

Polytechnics

POLYTECHNIC CYMRU

STUDENT SERVICES UNIT COUNCILLOR

The appointee will develop and run the Polytechnic Counselling Service, within a small, interdisciplinary unit, under the supervision of the Controller of Student Services. Experience is essential, and a counselling qualification is preferred. Membership of the Association of Student Counselling would be an advantage. Further details and application forms may be obtained from:—

The Assistant Director (Staffing),
The Polytechnic of Wales,
Pontypridd.
CF37 1DL
Tel.: Pontypridd (0443) 405133 ext. 2027

Closing Date:— 9th January 1981.

The Polytechnic of Wales

Research Posts

LOUGHBOROUGH UNIVERSITY OF TECHNOLOGY

RESEARCH FELLOW

Applications are invited for the post of Research Fellow at the Library Research and Development Department, the post involves working as investigative studies as a member of a team.

The post is tenable until February, 1983. Applications are invited from persons graduates willing to work as part of a team. Secretarial could be arranged. Informal enquiries may be made to the Director, Dr. R. Layzell Ward on 0509-211776. Salary within scale £4,795-£6,985. Further particulars and application forms from Paul Johnson, Establishment Officer, tel: 507 43 LS.

Loughborough Leicestershire

MIDDLESEX.

BRUNEL UNIVERSITY SCHOOL OF MATERIALS DEPARTMENT OF METALLURGY

Applications are invited for the post of RESEARCH ASSISTANT, Grade 1A, for a two-year period, funded by Science Research Council grant to investigate the influence of microstructure on the wear characteristics of aluminium piston rings. Candidates should preferably possess or be working for a PhD, and have experience in Powder Metallurgy or Tribology, desirable.

Starting salary will be Point 1 on the Grade 1A scale £5,615 (London Weighting plus £587 London Allowance).

Write for application form to Personnel Department, Brunel University, Uxbridge, Middlesex (Ref. 1A/THES) quoting Uxbridge 37188, ext. 49. Closing date: January 12, 1981.

DURHAM

THE UNIVERSITY

DEPARTMENT OF GEOGRAPHY

Applications are invited for the post of SENIOR RESEARCH ASSISTANT (Grade 1A) in the Geography Department to work from as soon as possible for one year with Dr. Tim Shaw and Hudson on the creation of new and updated datasets of climatological data sets and computer programme.

Previous experience in POPLAN and GLIM desirable, experience of POP 11 and IDM mainframe would be advantageous as would experience of handling such data as the Universal Matrix.

Salary scale £4,795-£5,985 (1st or 2nd year) or £6,605 to £8,985 (LA) plus superannuation.

Applications (three copies) naming three referees should be sent by January 9, 1981 to the Registrar and Secretary, Durham University, Laxton House, South Road, Durham DH1 3LE, from whom further particulars may be obtained.

Holidays and Accommodation

FRENCH MEDITERRANEAN PY. RENEES. Stone house holiday and guest house. Brochure: Lynn Ward, Sandbury, Oason, [illegible] 50414.

Administration

NEW POSTS IN ACADEMIC PLANNING

We are establishing a new unit in our Registry to provide support for academic planning and to deal with work related to course validations etc; and are therefore seeking applicants for the following posts:

a) ASSISTANT ACADEMIC REGISTRAR (PO1s)
Current Salary—£8,325 to £9,150

b) SENIOR ADMINISTRATIVE ASSISTANT (AP5/SO1)
Current Salary—£6,750 to £7,988

c) ASSISTANT ADMINISTRATOR (AP1/2)
Current Salary—£3,714 to £5,058
also there is a vacancy for:—

d) ADMINISTRATIVE ASSISTANT—Examinations (AP3/4)
Current Salary—£5,178 to £6,537
arising from the promotion of the present post-holder.

Applicants should have had previous administrative experience in an education environment and appropriate qualifications.

Application forms and details from:—
"Personnel", THE POLYTECHNIC WOLVERHAMPTON, WV1 1SB
Telephone (0902) 710654 (24-hr Ansafone)

LONDON

THE UNIVERSITY

THE LONDON SCHOOL OF ECONOMICS

ADMINISTRATIVE OFFICER

Applications are invited for appointment from April 1, 1981 in a post of Administration Officer in the School Registry and Graduate School Office. Duties will include assisting the Registrar and Secretary of the Graduate School in matters relating to scholarships, studentships, supervising academic committees, and other matters, including student records.

Candidates must possess a good honours degree. Some familiarity with computer applications or a willingness to acquire it, will be an advantage. Applications from recent graduates wishing to begin a career in university administration are welcome.

Appointment will be on the salary scale of Administrative Officers IA at £4,795 to £5,058 a year plus £600 a year London Allowance.

In assessing starting salary, consideration will be given to qualifications, age, and experience.

Application forms and further particulars are available, on receipt of a stamped addressed envelope from the Administrative Officer, Ref. 10/10, The London School of Economics, Houghton Street, London WC2A 2AE. Closing date for applications: January 19 1981.

TRAINING OFFICER
Programming & Systems
Nottingham c £8,000

We require a Training Officer for our Management Services Department based at Head Office in Nottingham, where our rapidly expanding computer capacity currently comprises an IBM 3032 and a 370/158. Development staff numbers are also increasing and over 150 programming and systems staff work on a wide variety of retail, industrial and accounting applications. We have a substantial new graduate intake annually and devote major resources to staff training and development.

The Training Officer has a comprehensive responsibility for maintaining and improving the quality of programming and systems analysts of all levels. This includes using external courses when appropriate and running internal training schemes which involve the use of video assisted instruction as well as personal instruction.

Candidates, male or female, should have the ability and practical programming experience (preferably IBM Cobol and Assembler) to be able to advise more senior programming staff on a range of technical problems. Experience of training or teaching coupled with well-developed communication skills would be a distinct advantage.

Salary is likely to be in the region of £8,000, plus a profit related bonus and staff discount facilities. Generous relocation expenses are available (where appropriate).

Please write or telephone for a personal data form or write giving brief details of career to date, education and present salary to: J. Haltam, Employment Manager (Commercial), The Boots Company Limited, Head Office, Nottingham. NG2 3AA. Telephone Nott'm. 56111.

Boots

Overseas

UNIVERSITY OF CAPE TOWN

RESEARCH FELLOWSHIPS

The University of Cape Town invites applications for Post-Doctoral Fellowships to be held at the University of Cape Town.

The fellowships are tenable for 12 months and the stipend attached to the Fellowship is R13 800. Successful candidates from abroad will receive an additional travel grant of R1 500. There is no restriction to any particular field of research.

Applications must include full details of the applicant's research programme in addition to a full curriculum vitae, and the names of two referees to whom the University may refer. The policy of the University is not to discriminate in the appointment of staff on the grounds of sex, religion, race, colour or national origin. The dates at which the successful candidates will be expected to take up their duties are flexible and can be arranged to suit the special circumstances of the candidate.

Closing date for the receipt of applications is 31 January, 1981.

Applications should be addressed to the Chief Administrative Officer, Research Administration, University of Cape Town, Private Bag, Rondebosch, 7700, South Africa.

Western Australian Institute of Technology

W.A. School of Mines
(Kalgoorlie, 600km east of Perth)

HEAD OF MINING AND ENGINEERING
(Ref. 347)

The Department of Mining and Engineering offers a range of undergraduate programmes in Mining, Mine Surveying and Engineering. Other courses available at the School are degree programmes in Mining Geology, Metallurgy and Business Studies, and postgraduate programmes in Metallurgy.

The Head of Mining and Engineering will be responsible for academic leadership, effective liaison with the mining industry, and co-ordination of the academic and administrative functions of the Department in co-operation with other sections of the School.

Academic and professional qualifications in Mining Engineering with relevant experience in the mining industry required. Tertiary teaching or research experience desirable.

Salary: $31,350.

Tenure: The post offers permanent academic tenure. It is Institute policy that persons appointed as Head of Department will be assigned the appropriate duties for an initial period of six years, with eligibility for renewal. Should an appointee not continue as Head of Department, the academic level and salary are retained.

SENIOR LECTURER — GEOLOGY
(Ref. 351)

Teach, develop and supervise the course in mining geology. Applicants should be experienced in Archean geology, preferably both in the field and underground. A good knowledge of ore genesis, ignaous petrology, structural geology and the broader aspects of stratigraphy, together with tertiary teaching experience is desirable.

Salary: $23,801 — $27,740.

Tenure: The position is available with permanent tenure, however the Institute is interested in receiving applications from persons preferring a Limited Term appointment.

Conditions include: Fares for appointee and family plus some assistance with removal expenses. Superannuation is available for staff with Permanent Tenure. Relocation fares are provided for staff appointed for a Limited Term. Subsidised housing.

Applications: Details, including names and addresses of three referees, should be submitted in duplicate not later than 15th January, to the Migration Officer, Western Australia House, 115 Strand, London WC2B 5AJ, from whom a brochure containing further information may be obtained.

When applying please quote position reference number and media code 948 HES.

Western Australian Institute of Technology

Head Curriculum Studies

The School of Curriculum Studies is one of three academic schools forming the Faculty of Education, which is led by the Dean (Head of Faculty) and the three heads of School (Teaching Studies, Curriculum Studies and Foundation Studies in Education).

The Programmes offered are Diploma of Teaching (Early Childhood and Primary), Bachelor of Education (Secondary) and a Diploma in Education for graduates from other fields. Programmes for Technical and Further Education teachers commence in 1981. Other programmes are Bachelor of Education (for qualified teachers), Graduate Diploma in Curriculum and Educational Technology and Master of Education.

A total of 1100 students (500 pre-service and 600 qualified teachers) are enrolled in the courses.

The Head will be responsible for leadership and co-ordination of staff and academic activity in the area of Curriculum Studies and will be responsible for educational leadership in one or more of the School's programmes.

Qualifications: Postgraduate qualifications in education with major studies in curriculum or related field.

Experience: Considerable experience in teacher education and the conduct of graduate education programmes preferably with experience in course planning and development.

Salary: Principal Lecturer — $21,383.

Tenure: The post offers permanent academic tenure. It is Institute policy that persons appointed to a Supervisory level be assigned the appropriate duties for an initial period of six years, with eligibility for renewal. Should an appointee not continue at this academic level and salary are retained.

Conditions include: Fares for appointee and family and assistance with removal expenses.

Applications: Details, including names and addresses of three referees should be submitted in duplicate not later than 16th January 1981 to the Migration Officer, Western Australia House, 115 Strand, London WC2B 5AJ, from whom a brochure containing further information may be obtained.

When applying please quote position reference number and media code 948 HES.

Western Australian Institute of Technology

Department of Economics and Finance

LECTURER — ECONOMICS (Ref. 353)
(Permanent Tenure Appointment)

Teach micro and macro-economics at undergraduate and postgraduate levels, mainly to business students. Postgraduate qualification and expertise in international trade, finance and monetary systems desirable. Practical experience in industry or government and in computer modelling of economic phenomena an advantage.

Salary Range: $17,739 — $23,304 (Aust)

Conditions Include: Fares for appointee and family plus some assistance with removal expenses.

Applications: Details, including names and addresses of three referees should be submitted in duplicate not later than 15th January, to the Migration Officer, Western Australia House, 115 Strand, London WC2B 5AJ, from whom a brochure containing further information may be obtained.

UNIVERSITY OF CAPE TOWN
Faculty of Music

SENIOR LECTURER IN MUSIC (VIOLIN)

Applications are invited from suitably qualified persons for the above post in the College of Music, vacant from January 1981. Commencing salary will be determined according to qualifications and experience on the salary scale R12 750—13 350 x 750—R17 100 per annum.

Applicants should be currently performing concert violinists and must have had teaching experience at the tertiary level. The successful applicant will be required to organise the work of the string section, to teach violin playing to students individually, to oversee the training of young pupils in groups, to lecture on teaching method and repertoire of the violin, and to coach student groups in chamber music. Apart from sole string quartet and general chamber music performing, the successful applicant will, among other things, be required to train the string orchestra and lead the University orchestra.

Applicants should submit a curriculum vitae, stating present salary, when available if appointed, and the names and addresses of three referees. Further information should be obtained from the Registrar, Room 10, Bremner Building, University of Cape Town, Private Bag, Rondebosch 7700, South Africa by whom applications must be received not later than 16th February 1981.

The University's policy is not to discriminate in the appointment of staff on the grounds of sex, race or religion. Further information on the implementation of this policy is obtainable from the Registrar.

SAUDI ARABIA

SENIOR TEACHERS of English Language with Travel, Saudi Arabia English another language, M.A., Diploma of Education, and at least three years of experience in teaching English as a foreign language.

Please apply with curriculum vitae and copies of qualification and experience. And two up-to-date references: Saudi Arabian Embassy, Educational Office, 69 Gloucester Square, London SW7 4QE, or phone: 01-734 0041 Ext. 34.

Courses

SUSSEX
THE UNIVERSITY
FULL-TIME M.A. IN EDUCATION
(CURRICULUM DEVELOPMENT IN HIGHER AND FURTHER EDUCATION)

This course has been designed to cater for the needs of staff with teaching responsibilities in Higher and Further Education, who are concerned with problems of Curriculum Development and Evaluation. Project work relates to the student's own institution or of special importance to the main themes of the course are: THE CURRICULUM, COURSE ANALYSIS AND EVALUATION, CURRICULUM DEVELOPMENT AND ORGANISATION OF PLANNED CHANGE.

The seminars and workshops are designed to encourage staff to contribute their own experience to the issues discussed, and to develop skills through their work assessed projects. Project work relates to students individual interest and to the needs of their institution, they are normally undertaken in their institutions during Weekend Study.

Applications are invited from experienced teachers in Higher Education, Further Education and elsewhere. Enquiries in the first instance to Course Tutor, Dr. Neil Jones, University of Sussex, Falmer, Brighton, Sussex BN1 9QN. Tel. (0273) 606755, Ext. 2281.

MIDDLESEX
BRUNEL UNIVERSITY
DEPARTMENT OF GOVERNMENT
M.A. IN PUBLIC AND SOCIAL ADMINISTRATION

The Department of Government offers places for a Masters course in Public and Social Administration.

The course is offered both as a one-year full-time and a two-year part-time course, involving attendance of one day a week.

Options in education, health, housing, the personal social services and social security are available in this course. The education option includes the study of the organisation of the education service, of its people and the analysis of its policy-making process. Head: S.E.A.C. Quota Status.

Application Forms from SAM, Department of Government, Brunel University, Uxbridge, Middlesex, including a SAE, to Mrs. P. Ward.

Closing date for applications November 21, 1980.

Announcements

ACADEMIC FASHION — Aim of course is to train students in Economics, Politics, Sociology, Philosophy, Law, Science of Economic Growth, Marxism, Social Ideology, Comparative Economic Systems, Planning and State Intervention, Work, Wealth, Y. Brisk, 4 Graham Road, Wembley, Middlesex.

Colleges of Higher Education

Applications are invited from suitably qualified and experienced graduates for the following posts:

Senior Lecturer in Youth and Community Studies

Applicants must have recent fieldwork experience, in addition to their teaching duties on the Diploma in Youth and Community Work and the B.Ed. (Hons.) Degree, the person appointed will be responsible for the organization, placement and supervision of students on practical work.

Two LII/Senior Lecturer Posts in Sports Studies

Applications must have an academic specialism in one of the following: Sports Psychology, Sociology of Sport, Methods of Enquiry, Exercise Physiology. In addition, the applicants (men or women) must be able to teach and coach in practical areas of Physical Education and Sports Technique.

Senior Lecturer in Education Management

Applicants must be qualified teachers with at least five years teaching experience and academically qualified in a discipline relevant to Education Management.

The person appointed will be responsible for the Postgraduate Diploma (C.N.A.A.) in Education Management (Secondary) and will also have teaching duties in the B.Ed. (Hons.) In-Service B.Ed. (Hons.) and In-Service M.Ed. programmes.

Two Posts for the B.A. (Combined Studies) Craft Programme

Applicants must be graduates who are practising craftsmen in one or more of the following areas: Wood, Ceramics, Metal, Textiles.

Post I—Senior Lecturer in Crafts

The person appointed will be responsible for leading the degree team.

Post II—Permanent Part-time Posts

Three one third full time or two one half full time posts are available.

Application forms and further details of the posts may be obtained from: The Assistant Director (Staffing), Crewe+Alsager College of Higher Education, Alsager, ST7 2HL.

The closing date for applications is Friday, 2nd January, 1981.

Crewe+Alsager College of Higher Education

HEREFORD AND WORCESTER COUNTY COUNCIL
WORCESTER COLLEGE OF HIGHER EDUCATION

LECTURER II/SENIOR LECTURER IN ENGLISH STUDIES

Applications are invited for posts in the DIVISION of ENGLISH STUDIES from September 1981.

The successful candidate will share in the work of a large Division responsible for a wide variety of courses and will be expected to sub-serve in either Shakespeare or the Romantic period, in supplement within the B.Ed., B.A. and B.A. (Hons.) in Combined Studies degrees.

Good academic qualifications are sought, including an appropriate higher degree, together with significant teaching experience at degree level.

The appointment will be on the Lecturer II Scale: £6,390 — £9,015 (currently £6,015 to £8,640) inclusive of London Weighting. Further particulars may be obtained from the Principal, Worcester College of Higher Education, Henwick Grove, Worcester, to whom completed applications should be returned within 28 days of the appearance of this advertisement.

All advertisements are subject to the conditions of acceptance of Times Newspapers Ltd., copies of which are available on request.

REMINDER

Copy for classified advertisements in the T.H.E.S. should arrive not later than 10.00 a.m. Monday preceding the date of publication

Please See PAGE 2 For Further Classified Appointments

© TIMES NEWSPAPERS LIMITED, 1980. Printed and published by Times Newspapers Limited, Printing House Square, London WC1X 8EZ. Telephone 01-837 1234. Telex 264971. Thursday 11 December 1980. Subscription rate £25 per annum. Subscriptions should be addressed to Times Newspapers Limited, Subscription Department, Box 7, Sunbury-on-Thames, Middlesex TW16 7UL. Subscriptions are not accepted in the United Kingdom and Eire. Subscriptions for Canada are payable to Times Newspapers Limited, 2 Park Avenue, New York, N.Y. 10016. Second class postage paid at New York, N.Y. and at additional mailing offices.

Union view

The downward spiral of student choice

Prior to the past few years official policy for higher education led to a more or less continuous increase in the numbers of students entering higher education. However, in recent years this continued expansion has been called into question both within central government and outside.

The watershed can be identified as far back as the early 1970s, when DES Education Planning Paper No 2, and the Conservative Government White Paper, *Education: A Framework for Expansion* in 1972, proposed a target student population of 750,000 for 1981. Some commentators at the time argued that this figure was too low. Growth continued during the 1970s but not on a trend consistent with the 1972 forecast. In 1978 the Government issued a discussion document, *Higher Education into the 1990s*, which put forward a number of models or patterns in which policy might be developed for the 1990s in response to the demographic downturn which was to hit the "traditional" higher education student entry in the early decade.

There was an overwhelming response in favour of the discussion document's "Model B". This proposed an expansion of opportunities for new student groups which could not gain access to the system as it was at present constituted; these groups would include working class students, women and girls and mature students, all of whom are considerably under-represented in the composition of the student population at present.

The virtual unanimity of response in favour of Model B seemed to indicate that any future planning for higher education must take account of the Model B proposals. By March 1979, however, the DES had already revised the projection of *Higher Education into the 1990s* to lower student numbers totals. The present Government has made it clear in its Expenditure White Paper that the planned student numbers for higher education will be reduced and that access will become more difficult.

The retreat from positive policies in higher education is being felt most acutely in the public sector. During the 1970s the polytechnics and other public sector higher education institutions were finding their feet, establishing courses and making development plans against a background particularly towards the end of the decade of expenditure cuts and institutional closures and reorganization.

The constraints on public sector student numbers have been exacerbated by the rundown and reorganization of many institutions. There was an intention to create new higher education places to make up for the opportunities denied to those groups (particularly young women), who had traditionally looked to teacher education for entry to higher education.

Those extra places were not created, partly because of a deliberate decision not to open a A level route into higher education in the arts and social sciences to parallel the opportunities which BEC and TEC have created in business and technician education.

The 1972 White Paper predicted that the age participation rate would rise by 1981 to "about 22 per cent of the age group then aged 18; compared with 7 per cent in 1961 and 15 per cent in 1971".

Age participation rate in full-time higher education (per cent of 18-year-olds):

	1971-72	1975-76	1979-80 (provisional)
All Higher Education	14.0	13.4	12.3
Excluding Teacher Education	12.0	12.1	12.2

Source: DES Statistical Bulletin 12/80, September, 1980.

These figures included teacher education. Government commentators have argued that the demand for higher education has slackened. In fact, if teacher education is excluded from the statistics, the age participation rate has remained remarkably consistent in spite of the economic and employment pressures and increased competition for places, but far below the level predicted in 1972.

The March 1980 public expenditure White Paper stated: "It is assumed that the total number of home students will remain broadly constant but this may require a small drop in the number of admissions". The available evidence indicates that admissions in 1980 have substantially increased despite the restrictions and constraints. Elsewhere ministers have spoken of the need for more competition for places and of the Government exercising controls over the range of subjects which students may study and the number of places in each—in spite of the notorious unviability of past manpower planning efforts.

The Price report was particularly scathing about these efforts to predetermine students' options in this way and reiterated the importance of the principle of student choice.

The Government's proposals, combined with major alterations to the level and means of funding, can only result in a serious distortion of educational opportunity. Now the DES consultative document *Continuing Education* puts forward the view that mature students, who have traditionally had least out of the education system, should bear the financial burden for their studies or get their employers to do so.

While other countries have also been faced with a questioning of the role of higher education in recent years, in the light of the economic and employment situation and the demographic downturn, they have not responded so negatively or so blindly. It is a sign of a total failure of confidence in the future that the Government can undermine the development of higher education in this way.

Jean Bocock

The author is assistant secretary for higher education of the National Association of Teachers in Further and Higher Education.

The MINIS approach to a maxi-task

Keith Hampson

Ministers lay down policy, civil servants carry it out. While fictionists of *Yes, Minister* may not quite tell with this old adage, it is still an official basis on which Britain is governed. Few Cabinet Ministers are interested—let alone lovelived—in how their departments are run, and most permanent secretaries under the role of chief policy adviser to their departmental minister.

This failure by both politicians and civil servants to take management seriously has probably played a vital part in the poor performance of British government over the past few decades.

In 1950 the public sector in this country employed a mere 7 per cent of the working population; today it employs more than 30 per cent—about three-quarters of a million people. Meanwhile public expenditure has risen to roughly 60 per cent of gnp.

The glaring truth is that the expenditure of many individual British government departments now exceeds the budgets of entire foreign nations. The Department of the Environment currently costs more than £10bn. Yet the state budget of the whole of Finland is less than £7bn.

But what do I mean by managing? I do not mean the mere day-to-day administration. The management of government must embrace:

- Deciding what has to be done to meet policy requirements.
- Knowing what resources are available in terms of people and cash.
- Implementing policy — right through to the bitter end.

Now all too many private companies fail to define their objectives adequately—or their success is meaningless in a way that that of government departments is not. So what hope is there for management by skilled ranks of politicians and senior civil servants?

What Michael Heseltine has tried to do at the Department of the Environment is to set management objectives—not the same thing as determining policies. In the case of the department, it was a question of deciding which tasks to give to each of the 66 directorates and each of the myriad sub-divisions within them. The problem was one of management control.

Mr Heseltine started with the awareness that when he entered the department he had no idea of who was doing what or why or whether they were doing it efficiently and economically.

Over the past 18 months he has therefore had each and every function of the department, from housing and gipsies to tree preservation, examined on its merits.

The results of the exercise, which cost around £100,000, have just been presented to the House of Commons Library for public scrutiny—if anyone has the patience to plough one's way through 17 volumes. It is called MINIS, an acronym for Management Information Systems for Ministers.

Each official had to say what he did, for how long and at what cost, and to rate the priority of each operation on a scale of 1 (high) to 10. This gave ministers a means of gauging whether or not their priorities were being passed down the line of command and acted upon. For the first time, it has become possible to determine not only who is doing what but also whether it needs doing at all.

MINIS showed that the highest priority was being given to the Local Government Land and Planning (No. 2) Bill, which cost £26,000 during its six months' passage through Parliament. More important still, ministers were able to identify exactly what resources they would have available once the Bill completed its progress through Parliament.

These resources can now be redirected to new priorities. Jobs across the board can be regarded—regardless of special pleading—or even ended if economies are necessary. What is more, it becomes easier to find economies while inflicting the minimum amount of damage. As a result, the Department of the Environment has become the only one to achieve a 10 per cent reduction in staff.

As Michael Heseltine says in his regular pep talks to his divisional heads: "We consume enormous resources; it is our duty to be satisfied that they are properly used." Yet until the MINIS exercise began, heads of divisions did not know the cost—in wages and salaries—of the jobs for which they were responsible.

MINIS is an indictment of how Whitehall has so far been run. It is also an indictment for not being interested enough—hitherto—to bother. Sadly, no other existing secretary of state has been willing to carry out a similar exercise to MINIS at least, not so far. Yet without a few home truths of the MINIS kind, Mark Carlisle, Patrick Jenkins and others are likely to be beaten by the special pleaders.

The new Department of the Environment initiative raises enough fascinating questions to warrant the interest of the new Departmental watching select committees. Why (Christopher Price might even start) is no similar exercise being adopted in the DES? For however imperfect a management tool it might prove to be, the very publication of the paper work lifts the lid from the inner workings of a department to an extent hitherto unknown.

Don's diary

Sunday

What should I expect of Japan? Childhood memories recall a photograph of Emperor Hirohito with General Douglas MacArthur with his hands in his belt, the emperor epitomizing pathetic dignity, the general like a lottordsy *shogun*, arrogant and imperious. I know I have prejudices. I hope I can relegate them in favour of truth.

Stunned still from the journey (when will airlines recognize that 6ft 3in is not an unusual height and accommodate such frames more reasonably?) I cross the road from my hotel and there is the moat surrounding the Imperial Palace, the seat of Hirohito, now in his eighties. Emperor since 1926, he has lived through the turmoil and travail which has brought Japan to its present world role, respected and envied and never ignored. The emperor is a distinguished marine biologist. It seems odd—perhaps this anomaly, if it is such, is a clue to the wealth that it now Japan's. Does it derive from a lotterdoy "Divine Wind" (kamikazé) which has given this ancient cultivated people the will to industrialize and normalize every western economy? What I believe is that Japan is technologically supreme; its system of education up to university level successively competitive; its unions militant; its inflation rate consistently high; its people apparently westernized, industrious and loyal to their employers; and the emperor no longer so by divine right but now "a symbol of the people".

Monday

Efficient briefing from Peter Martin, British Council representative in Tokyo, who had organized my visit with skill and perception. First meeting with EEC delegation in Tokyo to learn of the EEC scholarship scheme to place postexperience managers in Japanese firms. Given the staggering statistic that there are 70,000 Japanese currently doing business in EEC countries, and fewer than 4,000 from the EEC in Japan! Encouraged to believe that my attempt to expose business students to matters Japanese would be entirely worthy in the context of the existing balance of trade.

Had great difficulty in convincing officials of the ministry of labour that a sandwich degree course, developed in close association with employers, was anything more than an aberration. I am told that Japan and its industry recruits the best products of the universities for life and invests in them accordingly. Life-long employment becomes a refrain which accompanies me wherever I go.

Tokyo is clean and vandalism-free—for a Londoner a delight. Everywhere I go I am contented with business cards. I find bowing upon arrival and departure mighty unBritish.

Tuesday

The Monbusho (DES) officials are facetious at the notion of a sandwich degree — but listen with courtesy at the idea of placing suitably language-trained business undergraduates in Japanese firms. Find speaking through an interpreter tiresome—it reduces spontaneity and seems to limit candour.

The Kaizai Kohe Centre is supported by major business associations of Japan and especially by the *Keidanren* (CBI) and is an information and public relations arm of those it represents. The managing director of the centre, after advising me that he was neither a workaholic nor did he live in a rabbit hutch (there is much talk that all Japanese are the former and an insulting observation from an Englishman that they live in the latter has been the subject of considerable resentment), I muted *ceiui gui s'excuse s'accuse?* and then listened. The Kaizai Kohe would be delighted to help place United Kingdom business students in Japanese firms and the Keidanren would, of course, cooperate fully.

My hotel room is small but very comfortable. A newly laundered kimono type dressing gown each day is a luxury. I like the bath plug—a solid ball to fit most sizes—deter the baths, four foot long!

Wednesday

Visit the Institute for International Studies and Training at Fujinomiya, driving around the footlands of Mount Fuji. I am lucky to see its glory against a clear blue sky. IIST (or the Boeki Kenshu Centre) is a remote self-contained and very well-resourced graduate level institution especially set up for those who will work in international business, and has links throughout the world including IEAA at Fontainbleu. My discussions excite me to believe that here may be the right institution for the academic link that I have been seeking. If students from Ealing could spend three months here enhancing their expertise in Japanese and studying business organization prior to a work placement of two to three months, I come to the initial view that they would indeed be privileged.

Thursday

Nippon Electric Co. in the morning and Fujitsu Co. in the afternoon. I am almost overwhelmed by what I hear and see. To distil this day into a few lines is difficult—the essential lesson was though: "We recruit the best from the universities in all fields; we train our recruits with great care; we progress our employees throughout their lifetime of employment with us; developing and retraining always; investment in training is of equal importance to other types of investment; one cannot exploit investment in plant without concurrent appropriate investment in personnel." Loyalty is assumed and assured—the success of the company is paramount.

Friday

I am finding it very difficult to make any adjudication on the role and place of women in Japan. The innuendoes suggest that they are actually powerful in the family and their talents almost completely ignored by industry. Only in government have I encountered women in positions of responsibility, and one view suggested that expertise in the tea ceremony was deemed the most important qualification for a woman and an essential for marriage! The subordinate role of women may be an indicator of one of the limits of apparent westernization in Japan.

Gave an address on the place of colleges and polytechnics in the system of higher education in England and Wales at Seijo University. The president is an eminent and internationally recognized Shakespearean scholar, and my confrontation with his team of professors of English was a testing time for me!

Saturday

Shopping and reflections. I know much more of Japan and especially attitudes relevant to business education. I doubt that I know a great deal more about the Japanese. Exquisitely polite and punctilious in their attention, they seem innately adroit in being able to keep to the point without revealing much of their culture, and certainly they ensure that you come to the view that there is more to tell but that you will not necessarily be told!

I look down towards the Ginza from my hotel—the contradictions are stark. The emperor in his palace, the Chicago-type skyline, the booming wealth of the city and the confidence of these beautifully dressed and delightful people. Yet there is mystery and I begin to understand why those who try to understand why those who try to unmesh it commence a lifetime of infatuation with this amazing country.

Neil Merritt

The author is director of Ealing College of Higher Education.

Laurie Taylor

"McCardle?"

"*No, sir.*"

"Er McCondell?"

"*Not quite.*"

"Mc . . Mc . . McClusky?"

"*Noooh.*"

"Warm?"

"*Not very, I'm afraid.*"

"Er, Mc . . Mc . . Oh, give up. What is it?"

"McCellion."

"Ah yes. Of course. *McCellion. McCellion.* Well, that gets us half way. Now let's see. What exactly do you do? You're not one of our third-year students are you?"

"*No.*"

"Postgraduate?"

"*Not any longer.*"

"Technician."

"*No.*"

"Alright. Give up again. But it doesn't mean I don't know you very well. One meets so many people in this job that one's always forgetting faces: students, publishers' reps, chaps who've come to service the electric typewriters."

"*I'm the Senior Research Fellow on your five-year S.S.R.C. project on Social Mobility.*"

"So you are. So you are. Stupid me. Appointed you myself, didn't I? Oh yes of course. Sorry not to have been in touch in recent ? : erm . . . years, but things have rather piled up. Well, how's it all going on the project?"

"*Well, you should know, sir.* You're *published eight papers based on the findings.*"

"True. But you understand how it is. I didn't have time to go into all the details. Quite frankly your work has been so damn good that I have had no hesitancy whatsoever about simply putting my name on it and sending it straight off to the journals. So, anyway, what can I do for you today?"

"*I just come to say goodbye, sir.*"

"What's that?"

"*Goodbye, sir. The project finished at the end of last week. No more money. The other research workers thought I ought to pop in and let you know before they went to sign on.*"

"Very thoughtful of them. Much appreciated. Well, good luck for the future to all of you. Difficult times of course for employment, but you can always call on me for a reference. And that goes for all the others. Let them know will you. All three . . . or is it four . . . of them."

"*I'm sure they'll be grateful to you, sir. I'll leave the printouts and final report on your secretary's desk, shall I? I think you'll find that much of it is already in publishable form.*"

"Excellent. You know it's at times like this that one realises how important it is for academics to be fully involved in research. Out of the ivory tower. In the field. Yes, indeed. I just wish a few more of my colleagues would risk getting their hands dirty. What's wrong with some hard, private grind, I want to know. Some proper work. Academics have got a responsibility to the community. Must be prepared to get out and face the hustle and bustle of the market place. Oh yes. Well, McCardle, jolly good luck. And I'll certainly bear your name in mind if I decide to commit myself to any more research in the near future."

"*Thank you sir. Shall I close the door?*"

"Yes please. As quietly as possible."

"Ah yes. Of course, *McCellion. McCellion.* Well, that gets us half way. Now let's see. What exactly do you do? You're not one of our third-year students are you?"

"*No.*"

"Postgraduate?"

"*Not any longer.*"

"Technician."

"*No.*"

"Alright. Give up again. But it doesn't mean I don't know you very well. One meets so many people in this job that one's always forgetting faces: students, publishers' reps, chaps who've come to service the electric typewriters."

"*I'm the Senior Research Fellow on your five-year S.S.R.C. project on Social Mobility.*"

"So you are. So you are. Stupid me. Appointed you myself, didn't I? Oh yes of course. Sorry not to have been in touch in recent ? : erm . . . years, but things have rather piled up. Well, how's it all going on the project?"

"*Well, you should know, sir.* You're *published eight papers based on the findings.*"

"True. But you understand how it is. I didn't have time to go into all the details. Quite frankly your work has been so damn good that I have had no hesitancy whatsoever about simply putting my name on it and sending it straight off to the journals. So, anyway, what can I do for you today?"

"*I just come to say goodbye, sir.*"

"What's that?"

"*Goodbye, sir. The project finished at the end of last week. No more money. The other research workers thought I ought to pop in and let you know before they went to sign on.*"

"Very thoughtful of them. Much appreciated. Well, good luck for the future to all of you. Difficult times of course for employment, but you can always call on me for a reference. And that goes for all the others. Let them know will you. All three . . . or is it four . . . of them."

"*I'm sure they'll be grateful to you, sir. I'll leave the printouts and final report on your secretary's desk, shall I? I think you'll find that much of it is already in publishable form.*"

"Excellent. You know it's at times like this that one realises how important it is for academics to be fully involved in research. Out of the ivory tower. In the field. Yes, indeed. I just wish a few more of my colleagues would risk getting their hands dirty. What's wrong with some hard, private grind, I want to know. Some proper work. Academics have got a responsibility to the community. Must be prepared to get out and face the hustle and bustle of the market place. Oh yes. Well, McCardle, jolly good luck. And I'll certainly bear your name in mind if I decide to commit myself to any more research in the near future."

"*Thank you sir. Shall I close the door?*"

"Yes please. As quietly as possible."

LETTERS TO THE EDITOR

UGC control and the universities

Sir,—There are a number of major points of principle involved in the proposed extension of UGC control over individual universities, which were not discussed, either by Dr Parkes in his speech or by you in your editorial comment in support of Dr Parkes and more intervention. (*THES*, November 21).

The first is the question of entry into higher education. Britain's tertiary sector is neither particularly large, nor particularly easy to get into. But it was expanded in the 1960s on the basis of the principle that places should be available for qualified school-leavers wanting to take them up. Does the UGC stand by this principle or not? Dr Parkes talks about contraction and the fixing of targets for student numbers. He does not say whether this will or will not involve the denial of places to qualified school-leavers. This is a disgraceful omission.

Secondly, there is the principle, still broadly operative, that students study the subjects of their own choice. This, too, goes unmentioned in both the speech and your editorial. The indications are that the "rationalisation" being demanded by the UGC means the re-shaping of universities to fit more neatly with what one supposed to be the needs of the "economy". The subjects that will suffer will be those that have no obvious economic utility.

Students, however, have a tiresome habit of wanting to study subjects which they find interesting rather than those which governments and industrialists think to be useful. Earlier attempts to steer students towards the "useful" have not been conspicuously successful. Again Dr Parkes gives no indication of whether he considers student demand to be relevant to the enforced closures of departments he is now talking about.

Thirdly, there is the question of the nature of the UGC itself. Your editorial accepts the UGC's image of itself as a body representing the universities. To be sure, it is composed of academics—but not of academics chosen by the universities themselves. What is more its staff is composed of civil servants from the Department of Education and high level members of the DES sit in, I believe, at its every meeting. It looks increasingly like a branch of the DES and acts increasingly as the executor of government policy towards the universities.

For all these reasons, I think Dr Parkes' claim that the UGC is a staunch defender of university autonomy cannot possibly be accepted. His committee ought to be defending the principles of entry and student choice outlined above. Why is it not doing so?

Yours sincerely,
ANTHONY ARBLASTER,
Department of Political Theory and Institutions, Sheffield University.

Sir,—Your critical defence of Dr Parkes and his colleagues will not convince those who have read the Atkinson report and seen that—whatever gloss you now put upon its intentions—it abandoned the basic principles of honest inquiry. The UGC's acceptance of the report confirmed for most of us what has long been evident: that it has ceased to be a body acting on behalf of the universities and become an incompetent quango.

You suggest, emolliently, that the report "appeared too dogmatic and too insensitive to academic nuances", but that "similar exercises in the future will have lower profiles, be less dogmatic and more sensitive". As long as the UGC—still engaged in interviewing representatives of the luckless Nineteen—cannot provide its reasons for accepting Atkinson, nor commit itself to a reasoned, public explanation of its final decisions, it does not deserve our confidence in any other inquiry. Moreover, the recent speech by Dr Parkes to members of the CVCP, with its minatory overtones and tendentious phraseology, was an effort worthy of a Polish bureaucrat. In the face of all this pressure, the decision of the senate of Lancaster University to preserve its Russian studies department, deserves applause.

Your readers might note that the Parliamentary Select Committee on Education Arts and Science (Fifth Report, page xxviii) does not entirely share your confidence. It observes that ". . . the UGC will need to become more open about the grounds for its decisions. The report on Russian studies, for example, gives no reason for its recommendations in respect of particular institutions. We believe that if the UGC is to retain the confidence of the universities in a period of greater selectivity and rationalization it will need to justify its decisions in a much more open way than it has in the past".

Yours faithfully,
ALAN HALL,
4 Springpool, Keele University

Psychology reviews

Sir,—Certain reviews (*THES*, November 28) demand a right of reply. Dr Spencer's review of our *A Textbook of Psychology* seems to us so partial—in both senses of the word—that we feel obliged to interrupt our task of dusting off our old lecture notes and seek the opportunity to respond to some of his criticisms and aspersions.

It is very clear in the preface the book was written primarily with GCE A level students in mind and that we hoped that first-year undergraduates would also find the book useful. We deliberately chose to present a basic, literate account of modern psychology based firmly on its background. Dr Spencer clearly does not like this. He jibes at our "loyal devotion to Ebbinghaus and Bartlett", thereby falling into the undergraduate trap of defining "recent" only intentporal terms. Bartlett is in fact very recent in terms of impact—he was largely ignored in the past. Today, however, his notion of schema underpins artificial intelligence constructs, such as "frames" and "scripts", as well as the schema notions of current (yes, we do mean current) cognitive psychologists. He complains that "the ideas of Clark Hull still get an airing at North East London Polytechnic". We cannot necessarily speak for the majority of our colleagues who had nothing to do with this textbook, but we ourselves would answer: "Yes, Dr Spencer, of course they get just that—an airing." No bad thing with respect to a man who singularly illustrates a certain philosophical approach to scientific inquiry and thus remains an influential figure.

Spencer, in fact, seems to be unclear in his own mind whether we are merely historically orientated or devoid of new ideas. The two are not the same thing at all. He claims that only 14 per cent of the references in this book were published in the last 10 years. Though some of these are suggestions for further reading, which he simply has not considered. Of these more than two-thirds are after 1970, and of those 50 per cent are post 1975. His further unwarranted and rather offensive implication that all psychology at NELP must be primeval does not, as we see it, square with the record of published research maintained by this department.

It is a pity that the few good points that Christopher Spencer makes are devalued by his preference for playing to the gallery rather than attending to the book he was supposed to be reviewing. This makes, of course, for good journalism but it is not a style which has largely disappeared from academic reviews.

In this respect it is he who seems old-fashioned. But what a charming coincidence this is and what an agreeable picture one can make of it. We leviathans of the mud gently dozing while, overhead, a dragon fly, of even earlier origin, brings colour to it all.

Yours faithfully,
JOHN RADFORD
E. GOVIER
B. CLIFFORD
J. COYLE
P. EVANS
H. FISHER
C. GABRIEL
DENIS GAHAGAN
JUDY GAHAGAN
MARIAN PITTS
North East London Polytechnic.

Sir,—In his review of Flynn's book on *Race IQ and Jensen*, Ken Wilkie (*THES*, November 28) asks, "Do we need another book on the well-worn theme of the heritability or otherwise of intelligence?" That he phrases his question in this way suggests that we do. But when will somebody get it right? Jensen does not say that intelligence is heritable, nor does he say that intelligence is not heritable. Jensen would probably agree that anyone who asks the question, "Is intelligence heritable or not?" is probably confused.

Intelligence, like height, weight, shape of nose, eye colour or number of fingers, is a phenotype. A phenotype emerges as a result of interaction between genes and environment; for a phenotype neither genes nor environment is more important and neither can exist without the other. The concept of heritability is totally inapplicable to a discussion of phenotypes.

Heritability can apply only to differences between phenotypes. Differences between people in intelligence, like differences in height, weight, shape of nose, eye colour or number of fingers, can be ascribed to the influence of genes or to the influence of environment (or some combination of both). How this heritability is divided up depends on the circumstances, and this is what the discussion should be about.

This is a simple enough lesson, but it is surprising how much difficulty some people have in absorbing it. Even Eysenck, who often gets it right, gets it wrong on the same page in reviewing Wallis' book on *Personality and Heredity*. Certainly one's sympathies are with the Moorlah writer quoted by Entwistle. Some Europeans appear to lack all sharpness of wit and penetration of intellect. It is time they stopped writing about the "heritability of intelligence" and did some reading instead.

Yours sincerely,
ANNA RIDEHALGH,
Department of French,
Southampton University,
JOHN WILCOCK,
University of Bradford.

Boycotting South Africa

Sir,—I have written to you before about South Africa, but feel I must write again.

Robin Smith (*THES*, December 5) accuses Peter Wilkins of advocating personal boycotts of South Africa. I see no indication in Peter Wilkins's letter of his doing so. The general case for isolating South Africa (based on the illegality of the Apartheid regime) has long been recognized by the UN and is emboldened in its mandatory arms embargo. The case for a total boycott has been put for many years by the African National Congress which is leading the liberation struggle inside and outside the country. Until its banning in 1960, the ANC had a massive following in South Africa and it was in this period that it first called for a boycott.

Peter Wilkins said that the South African regime is on a war footing. This may seem intemperate language, but unfortunately it is an adequate description of the situation. Adult white males in South Africa are liable for annual military service; this applies also to foreigners who stay in the country for more than two years. The majority of young servicemen are sent to the Angola/Namibia border, where their task is to crush SWAPO, the liberation movement of a country which is under illegal South African occupation. Security forces inside South Africa are constantly on the alert against "terrorists"—to, the South African resistance.

I have said before that nobody should underestimate the valient efforts of South African blacks and whites who dedicate themselves to affecting a genuine transformation of the system; but as Robin Smith himself says, there is little hope of peaceful change. I certainly do not condemn the Wits academics, but my fear is that articles such as that about Wits (*THES*, October 31), while they give interesting information, may encourage British academics to feel that they should visit South Africa. John Gilliard Watson accuses Peter Wilkins (*THES*, December 5) of arrogance. The real arrogance may lie in thinking that by making an individual visit to South Africa an African people can contribute to affective change. I wish all success to those at Wits who are working to bring a just and democratic system, but as we as non-South Africans should heed the expressed wishes of the mass of the South African people and their broader struggle for their rights.

Yours sincerely,
ANNA RIDEHALGH,
Department of French,
Southampton University.

Overseas students

Sir,—Having just read your important leading article on overseas students (*THES*, December 5) I must draw your readers' attention to two particular points.

Firstly it was quite clear to most of those working with overseas students' admissions that the huge increase in fees imposed from October 1980, would have a dramatic effect on numbers *but in that years time*. This was said very firmly on many occasions but the influential speakers on this subject appear to have disregarded or disbelieved it. This hiccup in the system is obvious when one considers that a very high proportion of those classed as overseas students (I would put the figure at 70 per cent) apply from this country after a two-year A level course. The families of such students are committed therefore to five years of study and the extra cost will have been found somehow in order for that commitment to be safeguarded. Likewise the Malaysian Government gives scholarships for five years. Therefore the big drop is predicted for entrants to universities in October, 1982, and has already happened in the further education colleges, which locally report drops in enrolments for A level courses of between 50 and 80 per cent. The fall in overseas applicants reported by UCCA is somewhat of a surprise but may not in fact be reflected in admissions next October because of the long "tail" of relatively weak students who may have decided to try elsewhere.

Secondly in relation to your comments about government policy it is fairly widely known now that DES statisticians have for a long time, that the number of overseas entrants began to fall from October, 1978, when the undergraduate fee was only £750. One wonders why this fact has taken so long to emerge unless, as you hint, the Government does not really know what to do with the overseas student problem except price it out of existence.

Yours faithfully,
B. A. JENKINS,
4 Gibbe Street,
Beeston, Nottingham.

Polytechnics and the l.e.a.s

Sir,—Your readers could form the impression from Mr I. A. T. Maddison's letter of November 28, 1980, that the president of the Society of Education Officers I had suddenly suggested that local education authorities should exercise more control over polytechnics. The fact is that I wrote to you on November 7 in reply to a report which implied that the society was generally satisfied with current powers and wrote therefore likely to join opposition to the proposals made by CDEA. This was not the position and as the matter had been raised by a member of the society I simply clarified what the society, which is always prepared to listen to other views, has said on this subject. I should add that this does not reflect sent hostility towards polytechnics on part of the l.e.a. system: indeed several of the members of our society played a major role in their creation and development, and it may well be that a greater l.e.a. role could strengthen the position of polytechnics at a time when they need support.

I am sure, however, that my colleagues would not agree with Mr Maddison's concept that education departments have only a limited interest in industry. It may well be that in the past the education service has not always, and everywhere, shown sufficient interest. But of late the interest has been growing markedly and indeed in my view must and will continue to grow. And certainly the Society of Education Officers are in no doubt at all about the importance of industry to the education service and of the education service to industry.

Yours faithfully,
W. H. PETTY,
Society of Education Officers,
42 Great Portland Street, London.

Letters for publication should arrive on Tuesday at the latest. They should be as short as possible and should be written on one side of the paper only. The editor reserves the right to cut or amend them if necessary.

TIMES PAST THE TIMES

HIGHER EDUCATION SUPPLEMENT
New Printing House Square, London WC1X 8EZ. Telephone 01-837 1234

Publishers under pressure

Nineteen-eighty has been a difficult year for academic publishers. The Athlone Press, clumsily and messily bived off by London University, looks unlikely to survive. A publisher that has recently diversified into academic books, Scolar Press, despite the success of Montillot, has been put up for sale and its staff made redundant. Medium-sized publishers have been forced to cut back ruthlessly on any lists that have given the faintest hint of being unprofitable, and to trim both their staffs and their ambitions for the future. Even the largest of the academic publishers, the Oxford University Press, has reported a loss, although in this case the strong pound was the main culprit.

The general cause is clear. The austerity of Mrs Thatcher's Britain is a cold climate for small-scale entrepreneurs with high-minded customers. The particular causes are also obvious. Cuts in public expenditure quickly feed through to academic libraries. Inflation has caused many academic books to break through the £20 barrier, so pricing them effectively beyond the individual purchaser. High interest rates are particularly damaging to small businesses with long cash flows like academic publishers.

The present situation is made more alarming by the fact that new information technologies are looming on the horizon. These will revolutionise book publishing along with habits and styles of acquiring written information that are centuries old. They will go for beyond microfiche and other forms of micro-publishing. Although a fundamental challenge, it is one that publishers could easily meet and happily thrive upon in more buoyant time.

But the danger today is that in their weakened financial state and with inevitably lower morale this will be difficult even for big and medium-sized publishers and impossible altogether for the small publishers that are so honourably represented in academic publishing. Yet it is extremely important that traditional academic publishers should be in the forefront of introducing new technology partly because it may be particularly appropriate to their relatively small-scale market, partly because otherwise they may be pushed aside by publishing concerns with more money but less sensitivity.

Those universities which still maintain university presses have a particular responsibility at present. The same austerity that is grinding down small academic publishers is simultaneously and in similar ways grinding down the universities. So there is a great danger that in these sad circumstances a university press may be regarded as a peripheral activity. It may find it difficult to protect itself against the rival claims of teaching departments. The fact that the latter have tenured teachers while a press usually has only untenured employees makes it even more vulnerable.

Yet a healthy intellectual economy depends almost as much on diverse and responsible publishing outlets as it does on good teaching and research. In considering the future of their presses universities should remember this. They should also remember that it is precisely when the private sector of academic publishing is finding it most difficult to provide such outlets that they have a particularly heavy responsibility to maintain their number and quality.

An important aspect of steady-state higher education—and one that is largely unanticipated—will be the growing difficulty that academics will face in getting their work published. In the 1960s and 1970s the growth of academic publishing in America and Europe closely followed the increase in resources devoted to higher education. Now that the increase has stopped and may be replaced by an actual decline, the outlook for academic publishing is inevitably less bright.

Yet the reasonable opportunity to be published remains an important component of academic freedom, as important in its own way as tenure and decent pay for academics. Just as any rationalization of what courses should be offered to students and of what research should be undertaken requires the most careful consideration and should not be left to chance, so the inevitable rationalization of opportunities to be published should be an important item on the agenda of change. There is, of course, no easy answer, but that is no excuse for ignoring the question.

On the brink of a new anomaly

It is still too early to announce publicly the arrival of the new anomaly. The negotiating game is not over yet. It is still possible that this year's salary claim by university teachers, which had gone from Committee A to Committee B in the form of a recommended 13 per cent increase, will not be caught by the new 6 per cent limit. Some weeks Association of University Teachers' council meeting in London should not be allowed to degenerate into a circus of recrimination, against the Government, the Department of Education and Science, the AUT's own leaders, or any other handy target.

On the other hand, even if university teachers are not subjected to the full rigours of the new "incomes policy" they are extremely unlikely to receive the 13 per cent increase recommended by Committee A which would be necessary to keep them broadly in step with their colleagues in the National Association of Teachers in Further and Higher Education. In this sense a new anomaly is certain to be created. This only outstanding question is whether the final increase will be nearer 13 or 6 per cent.

The AUT will argue that the universities can afford to pay more than 6 per cent whatever advice they may have received from the UGC, because their cash limit for the period up to next April allowed for a larger increase. The universities will argue that uncertainty over overseas students means that there may not be as much money to play with as the AUT claims, that to squeeze non-salaries expenditure to allow for a larger salary increase could damage academic standards, and that for them to connive at a public breach of the 6 per cent limit would incur the anger of the Government (and provoke a further squeeze on the university grant next year?).

In any case the argument is no longer between the universities and the AUT, but between both of them and the DES with the UGC on the sidelines and the Treasury as the real orbital lurking in the background. However the fact that the universities were unhappy about the 13 per cent increase recommended by Committee A because it seemed to them too high is bound to make the task of the AUT in trying to persuade the DES to accept a breach, however technical and however discreet, in the new 6 per cent limit very difficult.

Rather than indulging in recrimination or negative expressions of anger next week's council should try to devise policies to prevent a third, and a fourth, anomaly arising. This means, first, a much closer association between the bargaining arrangements for the AUT and for the Universities Staffs Association in time for the First World War.

He was so small and slight that they would not take him at first. So he puffed out his chest and held his breath to persuade them of his determination and was sent to the front in 1915. After an interruption which treated fever he got back again and, with a colleague who was as small as he was, worked as a stretcher bearer until the end of the war. They were so small that shells went over them; he said his companion was the bravest man he had ever known; when I met the man, he said the doctor was in a class of his own for bravery, notably at Passchendaele, thigh deep in mud.

He hardly talked about these experiences and I used to wonder why. The answer was that he loved it. After his nervous nightmare of bringing it was freedom; it was company; and it was loyalty. For him it was a turning point.

So when he got back, slightly disabled from smashing part of his spine in a shell hole, he went back to the university and trained as a doctor. He became a Church of Scotland medical missionary and went to Africa, where he learned to make bricks, built a hospital and worked with the mission in Blantyre. But he met the White Fathers, among other missionaries, and decided to become a Roman Catholic. So terrible was the disgrace that his father, an elder of the Kirk, never raised his eyes again in Aberdeen. He found his way back, married a fellow student and they set out for Malaya.

He did all sorts of jobs in the Federated Malay States, as superintendent at the European hospital and for a time as the superintendent at a leper settlement, during which time one of his daughters was born. Again, he loved it; he built a village and a church and thought of staying but handed it back to the man whose post it really was and returned to his work as medical officer of health in Malacca. Reluctantly in 1934, with a family to look after, he decided to come home.

And that was another career. After some false starts in the Midlands he acquired a practice in the West of Scotland at Garelochhead. When much later I found myself watching *Dr Finlay's Casebook* on television I found myself captivated by the stories; for they were no different from his stories of tinkers and undertakers and district nurses. He spent his few leisure times fishing and reading. I have since met a retired journalist and artists who used to go out with him and found it on education. He could quotations, tell dirty jokes in Latin or Greek, knew a lot about wild life and a great deal about biology.

That was by no means his final placement. The education of his children took him from there to Edinburgh, where he acquired a practice in the house in George Square in which Sir Walter Scott had grown up. That was where I met him and that was where he seemed to have everything he wanted—good company and conversation, access to libraries, the Dominican priory and the Catholic student union next door. Dominican friars are usually an eccentric lot and include among their numbers the most intense scholars, philosophers and scientists as well as preachers. His patients included university professors, lawyers, policemen and a bewildering number of clergy of all types and sizes. He decided that his interests had veered towards psychiatry, attended clinics, studied and discussed endlessly and began to do more work in that field.

But the Health Service was introduced after the war and he never agreed with it. He thought it should be voluntary, predicted what would happen (most of which has though I must add I profoundly disagreed with him about this), found himself more or less penniless and decided at the age of 57 to start again. He sold what was left, emigrated to Canada ("What a sportsman", said the Emeritus Professor of Greek), took his medical examination again, eventually found himself in Nova Scotia and ended up there as deputy superintendent of a mental hospital.

He retired exhausted and disabled, found his way back to Scotland and died in hospital, without a cry for pity and without pleas for the pity which he had spent his life finding for other people. His name (to get round to it at last) was Guthrie Badenoch. He was an Aberdonian, as pig-headed as one can be, as independent as the forebears, as unswerving as a saint. And as uncomfortable.

What has brought all of this back to my mind was at the start of this column—brown bread and compost. I knew him well because after years of pursuit and argument I married one of his daughters. Let me end on the note of compost and an incident which burned itself into my mind.

One Saturday when I was alone in his house, there was a ring at the door and two men with a handcart of horse manure offered to sell it to me because the doctor had requested it. I told them to take it round to the back, gave them a florin for a drink while I checked up, and was not altogether surprised when the door bell rang again and a man asked if anyone had seen his load of manure which had been stolen. In due course I appeared as the principal witness in the Sheriff Court in what came to be known as *The Manure Case*, interrupted by bursts of coarse laughter, in which I was in danger of being convicted as an accessory after the fact. The doctor thought I had acquitted myself well and assured me that I would never forget the importance of compost.

Now shell I ever forget him. Now that experts are teaching what they laughed at him for saying 30 years ago, he must be laughing in paradise.

Science and separatism

In his final address to the Royal Society, retiring president Lord Todd told a meeting of the society last month that he believed organized de a fundamental reorganization of the scientific civil service in this country. In particular he urged that government needs a high level independent scientific adviser who should be chairman of a council similar to the original Advisory Council on Scientific Policy.

More radically, Lord Todd proposed that responsibility for science and the research councils should be removed from the Department of Education and Science, ending their second fiddle to arts, which he believes they play to education and, instead, science, technology and scientific policy should be taken over by a senior and influential minister, without portfolio, as was done in former days.

Such a move has approach benefits Science has not always been the priority it deserves within the DES. Part of the reason for this may have been its exclusion from the mainstream of the department under an isolated deputy secretary. However the recent decision to integrate science policy more closely with higher and further education under a single deputy secretary has also been received with certain ambivalence in the scientific community.

Yet Lord Todd's suggestion would also bring changes that could be far from beneficial for science. Most importantly, it would separate scientific research from its most crucial ally, higher education. In fact, both are so closely interwoven that it is hard to consider one without the other. It is vital that the young scientists of this country are educated in an environment enriched by the work of those involved in the forefront of the search for knowledge; their higher education would be considerably impoverished without its research input just as the work of scientists would be diminished without their involvement with the flow of bright young students who attend their classes.

It therefore seems a decidedly unsatisfactory arrangement to prise apart science and higher education and begin to fund them separately. Without its representation through the Secretary of State for Education science would lose a particularly important asset—a voice in the Cabinet. No high level independent scientific adviser who merely reports to Cabinet can be considered in any way to be an adequate substitute.

It therefore seems that Lord Todd's proposals are more disruptive than helpful, although they should by no means be dismissed out of hand. They have, if nothing else, raised again the whole question of the role of science in society and how we should support it; and that is always worthy of careful consideration.

Importance of being constant

Patrick Nuttgens

I learned the other day something I should have known about years ago, that doctors and dieticians are telling people that they should eat wholemeal bread and consume plenty of roughage. At the same time, the Reith lecturer seems to be saying (in those remarkably repetitive and sometimes depressing talks) that common sense and a concern for the healthy life might be a useful corrective to seeing the doctor as simply the technician who deals with illness. All of which takes me back to my student days and to the prophetic character whom for the moment I shall simply call the doctor.

The doctor was a little man, not much more than five feet tall, whom I first saw climbing awkwardly up the steps of his house in Edinburgh, rather stooped, with a stiff neck, a tweed suit and leather gloves. He was emphatic that we must all eat compost grown, stone ground, whole meal bread; and there was a loaf available which he had persuaded a baker to make which satisfied the criteria. It was good stuff. If you visited or worked for a friend of his who ran a drastically healthy guest house in the Lammermuir Hills, you could spread it with wonderful honey and eat great fruits and come back fit to start on anything again. He kept compost pits in the back garden, with a thermometer in each, and you might at any time be summoned out to record the temperature and admire the thing.

But if that gives the impression of a crank—and there were plenty of people who thought he was one—it was an impression that disappeared as I came to know him. He was an expert on the importance of trace minerals in diet. He had been born in Aberdeen. His father ran a clothes shop, his mother had been professionally trained to a missionary in Africa who had died and left it to her to carry his body a few hundred miles back to the coast. He had a typically Scottish classical education and took a degree from the University of Aberdeen in time for the First World War.

He was so small and slight that they would not take him at first. So he puffed out his chest and held his breath to persuade them of his determination and was sent to the front in 1915. After an interruption which treated fever he got back again and, with a colleague who was as small as he was, worked as a stretcher bearer until the end of the war. They were so small that shells went over them; he said his companion was the bravest man he had ever known; when I met the man, he said the doctor was in a class of his own for bravery, notably at Passchendaele, thigh deep in mud.

He hardly talked about these experiences and I used to wonder why. The answer was that he loved it. After his nervous nightmare of bringing it was freedom; it was company; and it was loyalty. For him it was a turning point.

So when he got back, slightly disabled from smashing part of his spine in a shell hole, he went back to the university and trained as a doctor. He became a Church of Scotland medical missionary and went to Africa, where he learned to make bricks, built a hospital and worked with the mission in Blantyre. But he met the White Fathers, among other missionaries, and decided to become a Roman Catholic. So terrible was the disgrace that his father, an elder of the Kirk, never raised his eyes again in Aberdeen. He found his way back, married a fellow student and they set out for Malaya.

He did all sorts of jobs in the Federated Malay States, as superintendent at the European hospital and for a time as the superintendent at a leper settlement, during which time one of his daughters was born. Again, he loved it; he built a village and a church and thought of staying but handed it back to the man whose post it really was and returned to his work as medical officer of health in Malacca. Reluctantly in 1934, with a family to look after, he decided to come home.

And that was another career. After some false starts in the Midlands he acquired a practice in the West of Scotland at Garelochhead. When much later I found myself watching *Dr Finlay's Casebook* on television I found myself captivated by the stories; for they were no different from his stories of tinkers and undertakers and district nurses. He spent his few leisure times fishing and reading. I have since met a retired journalist and artists who used to go out with him and found it on education. He could quotations, tell dirty jokes in Latin or Greek, knew a lot about wild life and a great deal about biology.

That was by no means his final placement. The education of his children took him from there to Edinburgh, where he acquired a practice in the house in George Square in which Sir Walter Scott had grown up. That was where I met him and that was where he seemed to have everything he wanted—good company and conversation, access to libraries, the Dominican priory and the Catholic student union next door. Dominican friars are usually an eccentric lot and include among their numbers the most intense scholars, philosophers and scientists as well as preachers. His patients included university professors, lawyers, policemen and a bewildering number of clergy of all types and sizes. He decided that his interests had veered towards psychiatry, attended clinics, studied and discussed endlessly and began to do more work in that field.

But the Health Service was introduced after the war and he never agreed with it. He thought it should be voluntary, predicted what would happen (most of which has though I must add I profoundly disagreed with him about this), found himself more or less penniless and decided at the age of 57 to start again. He sold what was left, emigrated to Canada ("What a sportsman", said the Emeritus Professor of Greek), took his medical examination again, eventually found himself in Nova Scotia and ended up there as deputy superintendent of a mental hospital.

He retired exhausted and disabled, found his way back to Scotland and died in hospital, without a cry for pity and without pleas for the pity which he had spent his life finding for other people. His name (to get round to it at last) was Guthrie Badenoch. He was an Aberdonian, as pig-headed as one can be, as independent as the forebears, as unswerving as a saint. And as uncomfortable.

What has brought all of this back to my mind was at the start of this column—brown bread and compost. I knew him well because after years of pursuit and argument I married one of his daughters. Let me end on the note of compost and an incident which burned itself into my mind.

One Saturday when I was alone in his house, there was a ring at the door and two men with a handcart of horse manure offered to sell it to me because the doctor had requested it. I told them to take it round to the back, gave them a florin for a drink while I checked up, and was not altogether surprised when the door bell rang again and a man asked if anyone had seen his load of manure which had been stolen. In due course I appeared as the principal witness in the Sheriff Court in what came to be known as *The Manure Case*, interrupted by bursts of coarse laughter, in which I was in danger of being convicted as an accessory after the fact. The doctor thought I had acquitted myself well and assured me that I would never forget the importance of compost.

Now shell I ever forget him. Now that experts are teaching what they laughed at him for saying 30 years ago, he must be laughing in paradise.